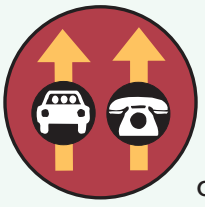
EXECUTIVE SUMMARY

Commute Profile is an annual survey of commuters who live in the nine-county Bay Area; this is the tenth edition. It is the Bay Area's only annual ongoing study that focuses on commuters and the decisions that influence their choice of travel mode to work. The survey is designed to track the commuting patterns of residents; it is designed to examine the behavior and motivation inherent in selecting a commute mode, and to begin the examination of commuters as distinct customer groups. The report is presented in two main sections. The Regional Profile section examines a single weighted data set of the nine Bay Area counties. Within this section are longitudinal comparisons of travel mode, travel patterns and motivation for the region as a whole. The County Profiles section examines each of the counties individually. Within this second section, a core set of the data are examined to provide a perspective on how commute patterns vary on a county-by-county basis.



The modes of transportation used for commuting have remained relatively constant. Driving alone continues to be the most popular choice and has fluctuated by only about two percent over the last five years. A small but steady increase in carpooling has been observed over the past couple years; 18% of commuters currently carpool to work. Telecommuting as a commute mode is back up to a little over one percent after a dip in 2001 to less than one half percent. Its use as an occasional mode and the percentage of respondents indicating telecommuting is an option for them has also increased over the last couple years. All these indicators point to a potentially larger role for telecommuting in the Bay Area's future.

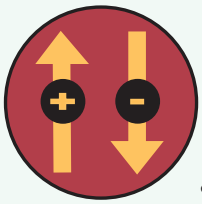
Carpooling		
2000	2001	2002
14%	17%	18%

Average commute trip distance is essentially unchanged over the past five years. Travel speed over the last year, however, has increased. This increase runs contrary to the trend of decreasing travel speed observed in previous years. The increase in travel speed appears to be related to the slow down in the economy—fewer jobs, fewer commuters and decreased

Executive Summary

congestion. The decrease in congestion puts some commute alternatives, which rely on congestion to make them more appealing, at a relative disadvantage. Along with an increase in speed, respondents' perceptions of their commute conditions are improving.

Travel Speed		
2000	2001	2002
30 mph	30 mph	32 mph

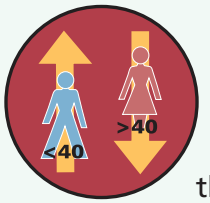


The percentage of respondents indicating their commute is "better now than it was a year ago" is greater than the percentage indicating their commute is "worse than it was a year ago" for the first time since questions of this nature were introduced in 1999. The "better" response is more than double what it was a year ago and the "worse" decreased by just less than half. For the three years prior to 2002, responses to these questions were very consistent; this year there is a distinct change. The reason for improved conditions cited by most respondents was "lighter traffic." Sixty percent of those who reported improved conditions cited lighter traffic.

Lighter Traffic		
2000	2001	2002
16%	26%	60%

About 10% of commuters use a carpool lane for their trip to work. For the first time in several years, the amount of time saved by users of carpool lanes decreased. It is unlikely that the travel speed in the carpool lane has changed so this is most likely another indicator of increased speed in the mixed flow lanes resulting from decreased congestion. As the travel time difference between the carpool and mixed flow lanes narrows, the travel time advantage of the carpool lanes is minimized. Commuters who reported saving time were more likely to indicate that the carpool lane influenced their choice of travel mode. Access to carpool lanes, usage, travel time saved and the influence of the facilities on mode choice as reported by respondents are all indicators of the effectiveness of the Bay Area's carpool lane network.

Time Saved		
2000	2001	2002
21 minutes	23 minutes	16 minutes



Younger respondents, those under 40 years of age, and male respondents indicated they are more likely to use a commute alternative than older and female respondents. Although males indicated they were more likely to consider carpooling, females are actually more likely to currently be carpooling. And younger females are equally as likely as younger males to currently be using transit or "other modes." Younger males, however, are more likely than older males to currently be using transit or "other modes."

Segmenting and targeting services to commuters makes sense because commute alternatives do not appeal equally to everyone. Driving alone on the other hand, because of the greater level of convenience and flexibility it offers compared with most alternatives, is appealing to the majority of commuters. The fact that most commuters drive everyday supports this assumption. *Commute Profile* provides evidence that younger commuters have a higher level of interest in the use of commute alternatives. It is possible to position customer services based on the knowledge that younger commuters show a higher level of interest. It might be beneficial, however, to further define higher potential market segments beyond the capabilities of *Commute Profile*.

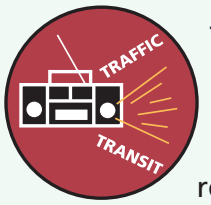
Eight of 10 (80%) Bay Area commuters have free parking available at their worksite. Free parking and the environment that accompanies it appears to influence commute behavior. Locations with free parking have a drive-alone rate of 75%, while those without free parking have a drive-alone rate of 47%. Transit use averages 4% where free parking is present and jumps to 29% in areas without free parking.

Transit Use

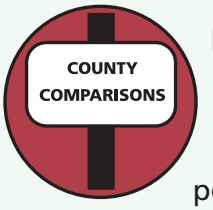
With Free Parking	Without Free Parking
4%	29%

About 40% of employers of respondents to *Commute Profile* encourage their employees to use transit, carpool, bicycle and walk to work. Their efforts appear to be valuable. The drive-alone rate among respondents who work where commute alternatives are promoted is about seven percent lower than at sites where employers do not encourage their use. Larger employers are more likely to encourage the use of commute alternatives. Twenty-four percent of small companies (0-50 employees) encourage transit use, carpooling, bicycling and walking while 68% of large companies (over 500 employees) do so.

Executive Summary



Traffic information is most useful in the morning to commuters and the radio provides what respondents consider the most reliable source. The Internet and the telephone, in the opinion of *Commute Profile* respondents, are the least reliable sources of traffic information. Fewer respondents had an opinion of the reliability of transit information—leading one to the conclusion that it is less important to most commuters than traffic information.



For the second year, *Commute Profile* includes a series of tables that summarize respondents' perceptions of commute conditions and options available to them on a county-by-county basis. Alameda, Marin and Sonoma respondents had the most positive outlook compared with a year ago.

Santa Clara County has the highest percentage of commuters who both live and work in the same county. For eight of the Bay Area's nine counties the percentage of commuters living and working in the same county increased over the last year.

San Francisco residents have the lowest drive-alone rate and Santa Clara residents the highest. For the first time since the *Commute Profile* series began, Contra Costa County has passed Solano County with the highest percentage of carpoolers living there. Transit use was once again most common among San Francisco residents.

Travel Modes by County

	Lowest	Highest
	San Francisco	Santa Clara
	San Francisco	Contra Costa
	Solano	San Francisco

Alameda and Solano commuters were most influenced (in their decision to carpool or use transit) by the presence of a carpool lane along their route to work. Commuters from the same two counties were also the most likely to save time on the trip to work as a result of using the carpool lane.

INTRODUCTION

This section describes Commute Profile's history and methodology.

Between mid-March and early May 2002, RIDES conducted the Bay Area's tenth *Commute Profile* survey. RIDES operates the Bay Area's Regional Ridesharing Program under contract to the Metropolitan Transportation Commission (MTC). *Commute Profile* is an annual region-wide telephone survey of commuters. The study is designed as a tool to help the Regional Ridesharing Program and others better understand Bay Area commuters and their commute patterns. *Commute Profile* is unique among Bay Area surveys in that it focuses on commuters, their travel behavior and trends that emerge from year to year.

To track commute trends over time, *Commute Profile* has retained a group of core questions. The core questions include:

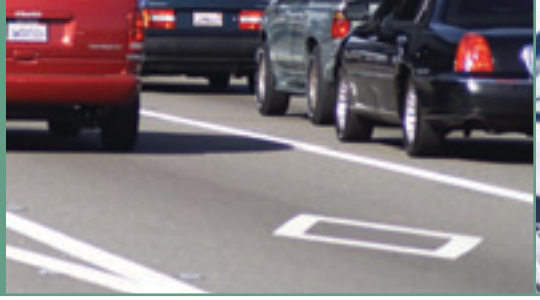
- Commute Modes
- Factors that Influence Mode Choice
- Travel Conditions
- Commute Distance and Time
- Use of HOV Lanes
- Influence of Employers and Employment Sites on Travel Behavior
- Potential Use of Options to Driving Alone
- Awareness of Commuter Information Services
- Demographic Information

Additional questions are rotated each year depending on current topics of interest to MTC and other partners who participate in the planning of *Commute Profile*. These rotating blocks of questions add an important element of flexibility to the study. This year's survey included a series of questions on how, when and in what format respondents preferred to access transit and traffic information.

Methodology

The target population for *Commute Profile* is adults over the age of 18 who are employed full-time (35 hours or more) outside the home. This is a key customer group for the Regional Rideshare Program's services so *Commute Profile* focuses on them; it also approximates the journey-to-work subgroup from the Census. The Census, however, includes part-time workers, students and people who work at home—making the data sets not fully compatible.

The sample size for *Commute Profile* has varied from year to year as a result of budget considerations, but the last four years have been consistent (Table 1). Larger sample sizes allow for more accurate regional data and for data that are meaningful at the county level. This year's survey included a regional sample of 3,643 respondents or just over 400 for each of the nine counties.



Introduction

TABLE 1
Commute Profile Historical Summary

Year	Completed Questionnaires	Counties With Full Sample	Direct Costs Budget[1]
1992	1,600	1	$22,245
1993	2,800	6	$40,325
1994	3,200	7	$44,600
1995	1,090	2	$11,844
1996	3,450	8	$41,152
1998	1,608	2	$19,000
1999	3,628	9	$42,000
2000	3,600	9	$42,670
2001	3,600	9	$44,740
2002	3,643	9	$57,530

Between March 13 and May 1, 2002, a market research consultant administered telephone surveys to 3,643 Bay Area residents. Phone numbers were randomly generated, and calls were made in the evenings or on weekends. The interviews were divided between counties as shown in Table 2. For the region-wide analysis, a weighted data set is used. The weighting is based on employed residents per county (Table 2). For the county-level analysis, the original data are used to provide the maximum sample size for each county.

Commute Profile data are based on samples and, as with any sample, some of the year-to-year fluctuations are due to normal sampling error. County populations, based on employed residents, vary from 62,000 (Napa) to 929,000 (Santa Clara).[2] The samples of 400 from each county have a normal sampling error of five percent and a confidence level of 95 percent associated with them. The region-wide population of employed residents is estimated to be 3,500,000. The regional sample of 3,643 has a normal sampling error rate of two

TABLE 2
Distribution of Interviews by County

County	Completed Interviews	Weighted Sample For Regional Analysis
Alameda	414	1.84
Contra Costa	401	1.16
Marin	406	0.36
Napa	404	0.15
San Francisco	401	1.12
San Mateo	402	1.00
Santa Clara	406	2.35
Solano	403	0.47
Sonoma	406	0.54
Total	3,643	

[1] This is the budget for acquiring the sample, conducting the telephone interviews and delivering a clean data set. It does not include questionnaire design, analysis, report preparation or printing – RIDES staff time for these tasks is approximately three months (0.25 FTE).
[2] Population estimates are based on *ABAG Projections 2000*.

percent and a confidence level of 98 percent associated with it. A two percent sampling error means if the survey was conducted 100 times, one would be confident that 98 times out of 100, the characteristics of the sample would reflect the characteristics of the population within plus or minus two percent.

In some cases, *Commute Profile* examines sub-samples of the regional or county data sets where the sample sizes are smaller. Each table in *Commute Profile* includes the actual sample size in the format of (n=sample size). The normal sampling error increases as the sample size decreases as is shown in Table 3.

TABLE 3

Normal Sampling Error Rates

Sample Size (n=)	Sampling Error	Confidence Level
3,600	2%	98%
400	5%	95%
270	6%	95%
200	7%	95%
150	8%	95%
120	9%	95%
100	10%	95%

Key to Icons


Drive Alone


Carpool

Vanpool


Bus

Transit
Includes buses, trains and ferryboats.


Bicycle


Walk


Light Rail


Motorcycle


Ferry


Telecommute

BART


Commute Train
Includes ACE, Caltrain and Capitol Corridor.

Altamont Commuter Express

Caltrain

Amtrak Capitol Corridor

See footnotes on tables and figures for specific definitions.

REGIONAL PROFILE
HOW BAY AREA RESIDENTS COMMUTE

This section discusses commute modes, commute distance, travel time, flexibility and start time, carpool lane use, carpool composition and telecommuting.

Commute Mode

For the second year, *Commute Profile* includes an expanded look at travel modes. In addition to the primary mode of travel (defined as the part of the trip that covers the greatest distance), data were gathered on connecting and occasional modes. All respondents were asked if their entire commute was made using one mode or if their normal trip to work involved the use of additional or connecting modes. If the number of days per week an individual used his/her primary mode did not match the number of days per week worked, they were also asked what other modes they used on an occasional basis.

The primary commute modes for this year are almost identical to last year (Figure 1). Use of carpools[3] and buses, the second and third most popular modes, remained the same as last year. The number of commuters driving alone and the number using BART are each one percentage point lower than a year ago. Not on the list last year, but on this year's list, are a few respondents (less than one percent) using the ACE and Capitol Corridor trains. Telecommuting is back up from last year where its use dropped to well under 1% (0.2%); the 1.2% reported this year is similar to 1999 and 2000 where its reported use was 1.1%. The changes in primary travel mode between the 2001 and 2002 surveys were minor.

Last year, however, there were some larger changes in primary travel mode compared with previous years. Transit use (BART, in particular), telecommuting and bicycling were lower. It appeared the differences were due largely to the changes in how respondents were asked to describe their journey to work (i.e., to elaborate on their primary, connecting and occasional commute methods). This change seemed to most directly impact BART ridership estimates. For example, in previous years respondents who indicated their primary mode as a BART and drive combination would likely have been classified as primary mode BART. With the more detailed questions, respondents would have been separated into primary and connecting modes; the result being a primary mode classification that was derived differently than previous years. Given the consistency in results between the 2001 and 2002 surveys, it appears the change in methodology made last year did (and continues to) modify the survey results.

Just over 12% of respondents indicated their normal trip to work involved the use of more than one mode (Figure 1). The most popular connecting modes are driving alone, riding the bus, carpooling and BART. The results mirror last year in that these same four modes were the most commonly used then also. The

[3] Respondents who initially indicated that they drive alone, but later indicated that they have others in the car with them three to five days per week were reclassified as carpools.

FIGURE 1

Commute Modes

Primary Commute Mode

Drive Alone	68%
Carpool	17%
Bus	5%
BART	3%
Walk	2%
Bicycle	1%
CALTRAIN	1%
Telecommute	1%
VAN	1%
Motorcycle	<1%
Ferry	<1%
Light Rail	<1%
ACE	<1%
CAPITOL CORRIDOR	<1%

n=3,614

Connecting Modes

Drive Alone	2%
Bus	2%
Carpool	2%
BART	2%
Bicycle	1%
Walk	1%
Ferry	1%
Light Rail	<1%
Motorcycle	<1%
Ferry	<1%
VAN	<1%
OTHER	<1%
NONE	88%

n=3,614

Primary and Connecting Modes Combined

Drive Alone	63%
Carpool	17%
Bus	6%
BART	5%
Walk	3%
Bicycle	2%
CALTRAIN	1%
VAN	1%
Telecommute	1%
Light Rail	1%
Ferry	1%
Motorcycle	<1%
ACE	<1%
CAPITOL CORRIDOR	<1%
OTHER	<1%

n=3,614

Occasional Commute Modes

Telecommute	5%
Carpool	2%
Drive Alone	2%
BART	1%
Bus	1%
Bicycle	<1%
Walk	<1%
CALTRAIN	<1%
Motorcycle	<1%
Ferry	<1%
Light Rail	<1%
VAN	<1%
OTHER	<1%
NONE	90%

n=3,614

How Bay Area Residents Commute

percentage of commuters using connecting modes was somewhat higher this year—12% compared with 10% last year.

The primary and connecting modes in Table 4 have been clustered in four groups (drive alone, carpool, transit and other)[4] for easier comparisons. The table shows the types of connecting modes used based on primary mode. For example, of those commuters whose primary mode is driving alone (first row), 30% drive to meet a carpool, 63% drive to catch transit and 7% drive and then use an "other mode" to complete their journey to work.

Transit users were the most likely to use connecting modes on their normal commute trip—40% use a connecting mode—and they are most likely to use multiple transit modes or drive for part of their trip. Drive-alone commutes were the least likely—only 7% use a connecting mode. Twenty-six (26%) of "other mode" users and 12% of carpoolers use connecting modes. Transit was the most frequently used connecting mode for all four modal groups.

The higher use of connecting modes in combination with transit, points to one of the biggest challenges associated with encouraging commuters to use transit for

TABLE 4

Primary Mode by Connecting Mode

Primary Modes	Connecting Modes			
				OTHER
Drive Alone 7% of drive alones n=168	—	30%	63%	7%
Carpool 12% of carpoolers n=75	18%	16%	59%	7%
Transit 40% of transit users n=136	38%	7%	41%	14%
Other 26% of other mode users n=40	30%	2%	57%	11%

[4] "Drive Alone" includes motorcycles and taxis; "carpool" includes vanpools; "transit" includes buses, trains and ferryboats; and "other" includes bike, walk and telecommute.


their commute trip—direct service from home to work is difficult to provide and not that common. The challenge is to provide efficient connecting service between home and transit or transit hubs and work.

Combining primary and connecting modes provides the most complete view of commute trips to work. This perspective gives equal weight to modes used for all or a portion of the trip. In other words, if an individual drives to BART their trip will show up twice—once in the drive-alone category and once in the BART category. Because one person's trip to work can include multiple modes, the total number of trips represented here is greater than the number of trips represented in the table that shows only primary trips. There are some differences between the combined primary and connecting modes and the primary only modes. The percentage of trips made driving alone decreases by about five percent (from 68% to 63%) while the percentage of bus, BART, walk and bike trips increases. The percentage of trips made carpooling remains constant.

Approximately 11% of respondents indicated they use a different method of commuting on an occasional basis. The use of occasional modes increased from last year when only 7% of respondents indicated they used an occasional mode. An occasional mode is a completely separate mode used on days when commuters do not use their normal mode or modes of travel for their trip to work. Telecommuting is the most popular occasional mode. About four of 10 of respondents who use an occasional mode telecommute (Figure 1). Driving alone and carpooling are the two next most commonly used occasional modes. The use of telecommuting as an occasional mode has increased from last year. In 2001, about two percent of respondents telecommuted; this year it is up to 5%. And this is quite different from two years ago when only 1% of respondents telecommuted as an occasional mode and it was third on the list of occasional modes behind driving alone and carpooling. The fact that telecommuting bounced back in the primary mode grouping and its strong showing here in the occasional mode group may indicate an overall increase in its use.

Changes in clustered modes between the 2001 and 2002 surveys were minimal (Figure 2). With the exception of a small increase in carpooling, the percentage of commuters driving alone, using transit and using "other modes" stayed the same. Some of the changes noted in past years were at least partially attributable to changes in the methodology used to classify individuals.[5] This year the methodology did not change and the results are consistent with the previous year. The only emerging trend to point to is the gradual increase in carpooling.

[5] There have been two changes in methodology since the survey began in 1992. In 1998, a change was made in how carpools were classified (drivers who have passengers a minimum of three days per week are classified as carpoolers—previously data was not available on frequency so all drivers with passengers were classified as carpoolers), resulting in a shift of about two percentage points from carpooling to driving alone. In 2001, the survey began collecting more detailed information on the mode used to get to work. This information was expanded to include primary, connecting and occasional modes. This had the impact of shifting some trips from transit to other modes.

How Bay Area Residents Commute

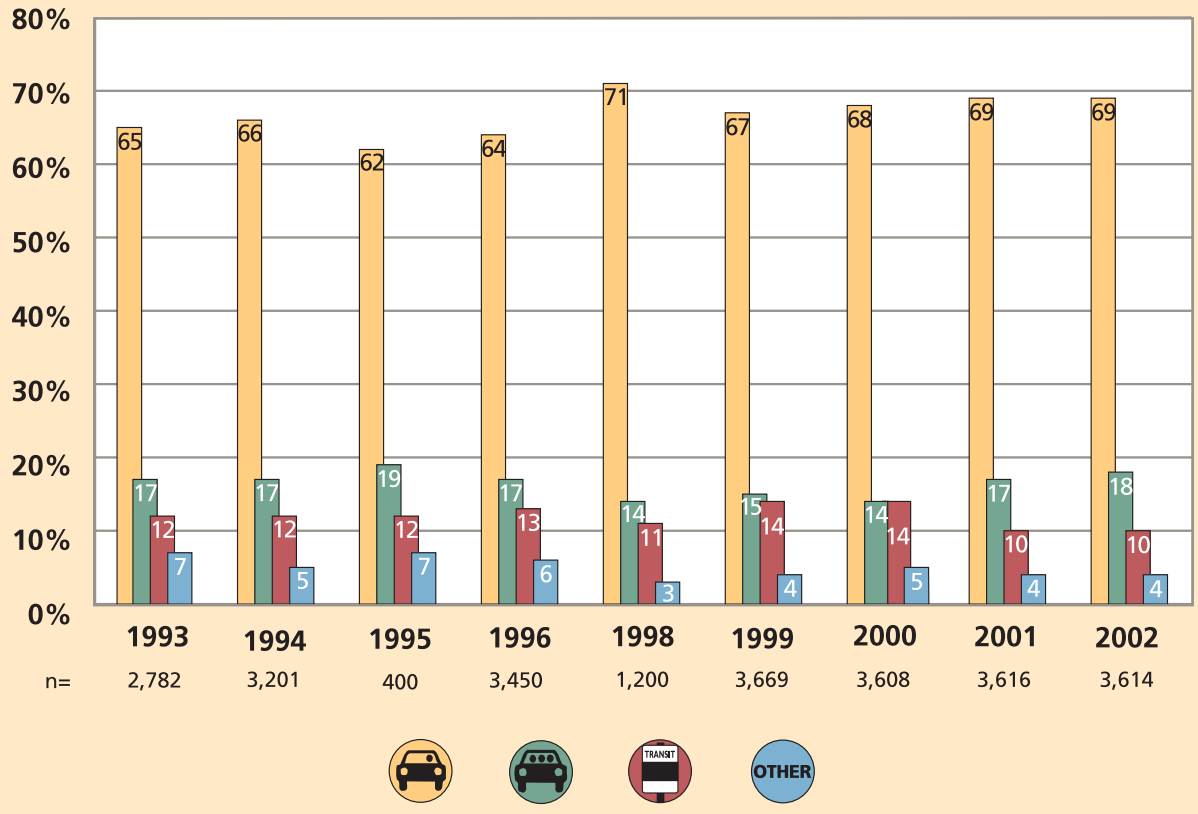
Taking into consideration the effect of methodology changes, the use of carpooling is at its highest level.[6]

County Comparisons

There are a number of differences in commute modes among commuters who live in different counties, some subtle, some more obvious, but mostly related to the options that are available. The availability of transit and parking, as well as travel distances, appear to influence commuters' choices. Driving alone is most popular for commuters who live in Santa Clara, Sonoma and Napa counties (Figure 3). San Francisco commuters are the least likely to drive alone to work; they have the highest transit and "other mode" use

FIGURE 2

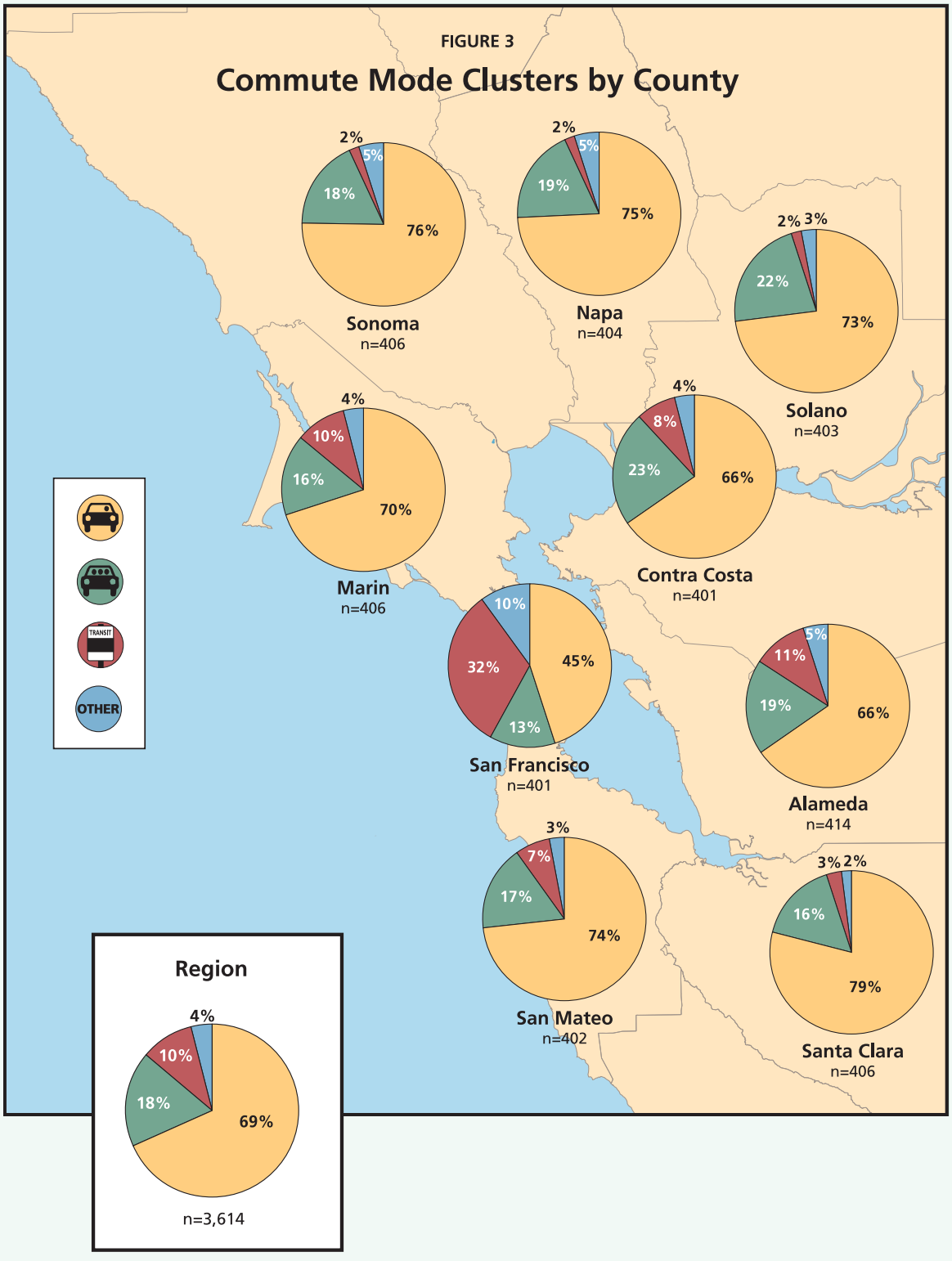
Clustered Primary Modes Over Time



[6] It is important to note that sample sizes in 1995 and 1998 (because of budget considerations) were smaller; data from these two years should be viewed with added caution.

FIGURE 3

Commute Mode Clusters by County



How Bay Area Residents Commute

and the lowest carpooling rate. Contra Costa for the first time has unseated Solano as the county with the most carpoolers living there. Transit use is distinctly lower in Napa, Solano, Sonoma and Santa Clara. While the first three counties (Napa, Solano and Sonoma) lead one to the conclusion that transit use is lower in counties with relatively smaller populations, Santa Clara's presence among the lower transit users leads one to believe the explanation is more complicated.

Commute Distance

Like some of the earlier data on travel modes, trip distance has remained fairly constant over the years (Figure 4). The average of all years combined is just less than 16 miles one-way. This year's estimate is just about average. The data collected over the years moderates any claims that commute distances are getting longer. *Commute Profile* does not sample residents from counties beyond the nine core counties. Commuters from counties such as San Joaquin and Stanislaus, who may be making longer trips, are not included in this study. Even if these commuters from some of these outlying counties were included in the study, they comprise a small percentage of commuters and would not dramatically influence results.

FIGURE 4

Average Regional Commute Distance (one-way)

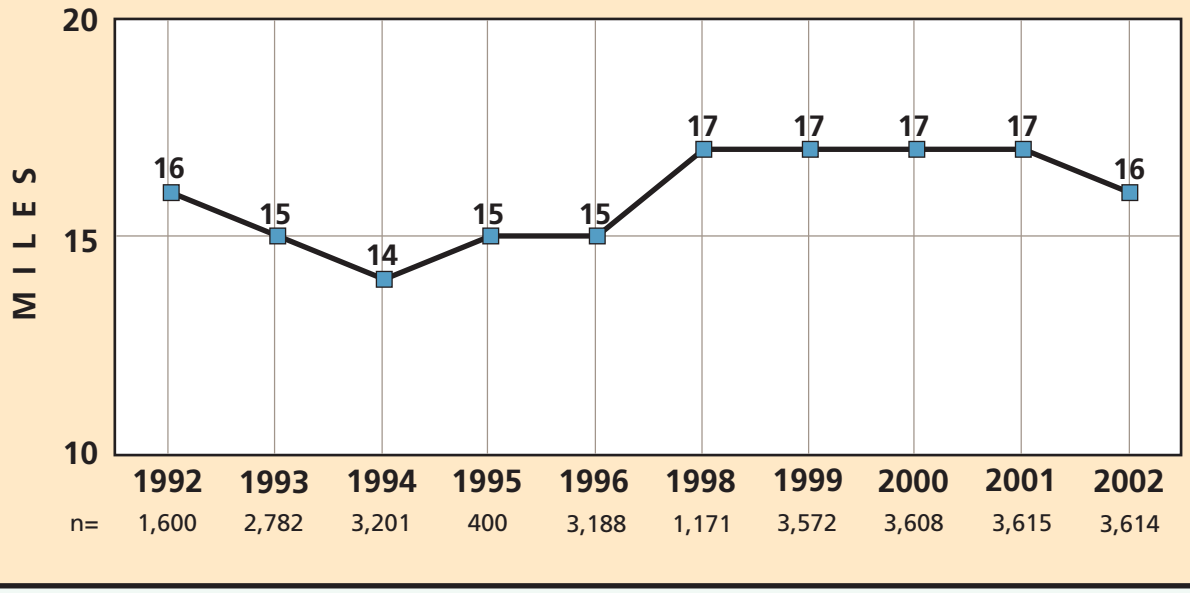


TABLE 5

Commute Distance Over Time

One-Way Miles	1996	1998	1999	2000	2001	2002
0 – 5 Miles	33%	25%	28%	28%	28%	30%
6 – 10 Miles	20%	20%	20%	17%	20%	20%
11 – 20 Miles	25%	28%	26%	26%	25%	27%
21 – 40 Miles	16%	21%	19%	22%	20%	18%
41+ Miles	7%	7%	8%	7%	6%	6%
n=	3,188	1,171	3,572	3,608	3,615	3,614

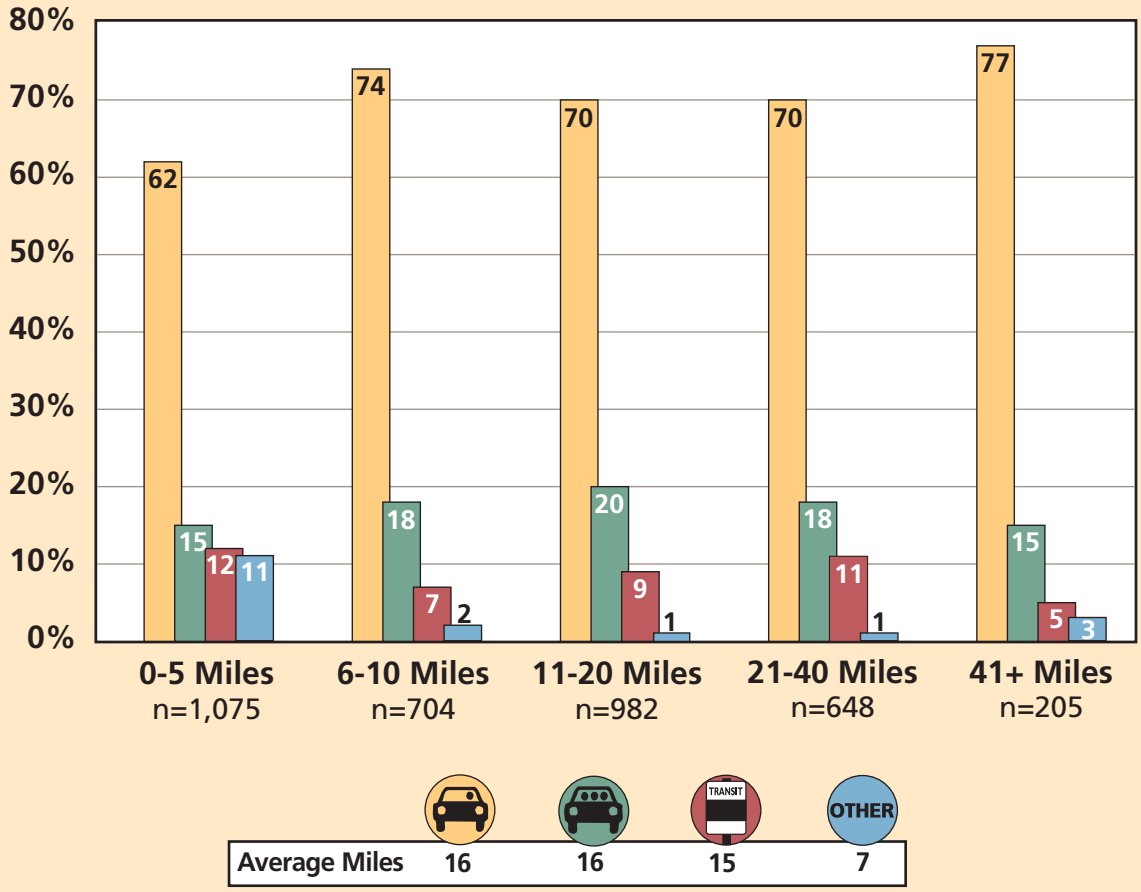
Looking beyond the averages shown in Figure 4, commute distances are displayed by mileage ranges in Table 5. This more detailed perspective provides some insight into what is and is not changing. The changes are again subtle, but the percentage of commuters traveling a relatively short distance increased slightly from the last few years; while the percent of commuters falling into the longest distance category has not changed. Those in the 21 – 40 mile range also decreased a bit. Looking at these changes collectively explains the small decrease in average commute distance between the 2001 and 2002 surveys.

Short distance commuters are the least likely to drive alone (Figure 5) and the most likely to participate in a biking or walking mode (i.e., "other modes"). Transit usage is highest among the shortest and the medium-long distance (21 - 40 mile) commuters. It is possible that shorter distance commuters may be more likely to find a direct transit link between home and work and longer distance commuters may appreciate the lower cost and "useable time" advantages of transit. Carpooling is highest among commuters who travel 11 - 20 miles, and those traveling the longest distances are the most likely to drive alone. This finding differs a bit from previous years where driving alone was highest among the middle ranges and carpooling tended to go up from the longest distance commuters. The changes, however, are not dramatic.

How Bay Area Residents Commute

FIGURE 5

Commute Mode by Distance



County Comparisons

Solano County residents continue to travel the longest distance to work (Table 6). On average, these commuters travel more than twice the distance of commuters who reside in San Francisco. Last year it appeared Contra Costa County residents were closing in on Solano commuters for the longest distances, but this year's data indicate that may not be the case as Contra Costa


TABLE 6

Average One-Way Commute Miles by County of Residence

County	1996	1999	2000	2001	2002
Solano	23	27	27	25	25
Contra Costa	19	21	22	23	20
Sonoma	19	21	20	20	19
Napa	19	19	20	18	17
Marin	16	17	18	18	17
Alameda	16	17	17	17	16
San Mateo	16	15	16	16	15
Santa Clara	14	14	14	12	14
San Francisco	9	11	12	13	11

n=approximately 400 for each county each year

distances show a decrease. Last year San Francisco and Santa Clara also traded places as the county with the shortest commute. This year San Francisco is back at the bottom of the chart (not a negative distinction) with the shortest average commute distance. The ranking of counties by average commute distance, other than San Francisco and Santa Clara trading places last year, has remained the same over the years.

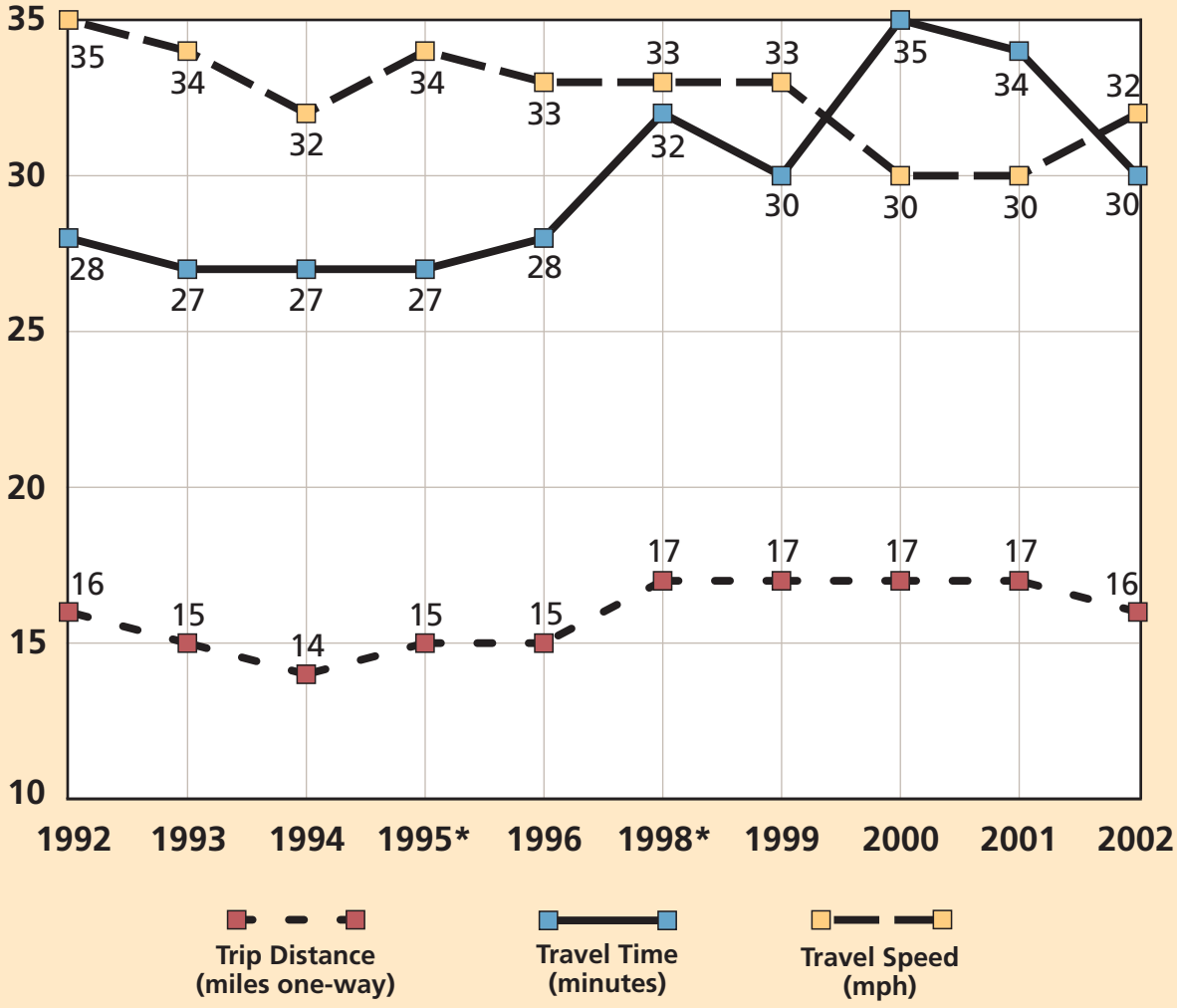
Commute Time

Travel time to work may well be the strongest indicator in the *Commute Profile* series of how the slower economy (in combination with improvements to roadways and transit services) has impacted congestion. In 2000, the economy was at a peak and travel time had reached its highest level. As the economy has cooled down in 2001 and 2002, travel times have decreased. Based on the data gathered on distance and time, travel speeds were calculated. For the first time in six years this measurement of commute conditions shows an increase in speeds—as perhaps there are fewer commuters on the road each morning (Figure 6). Respondents' perceptions of commute conditions have also improved over the last year (discussed in more detail later)—lending further support to the hypothesis of improved commute conditions as a result of fewer jobs.

How Bay Area Residents Commute

FIGURE 6

Travel Time to Work



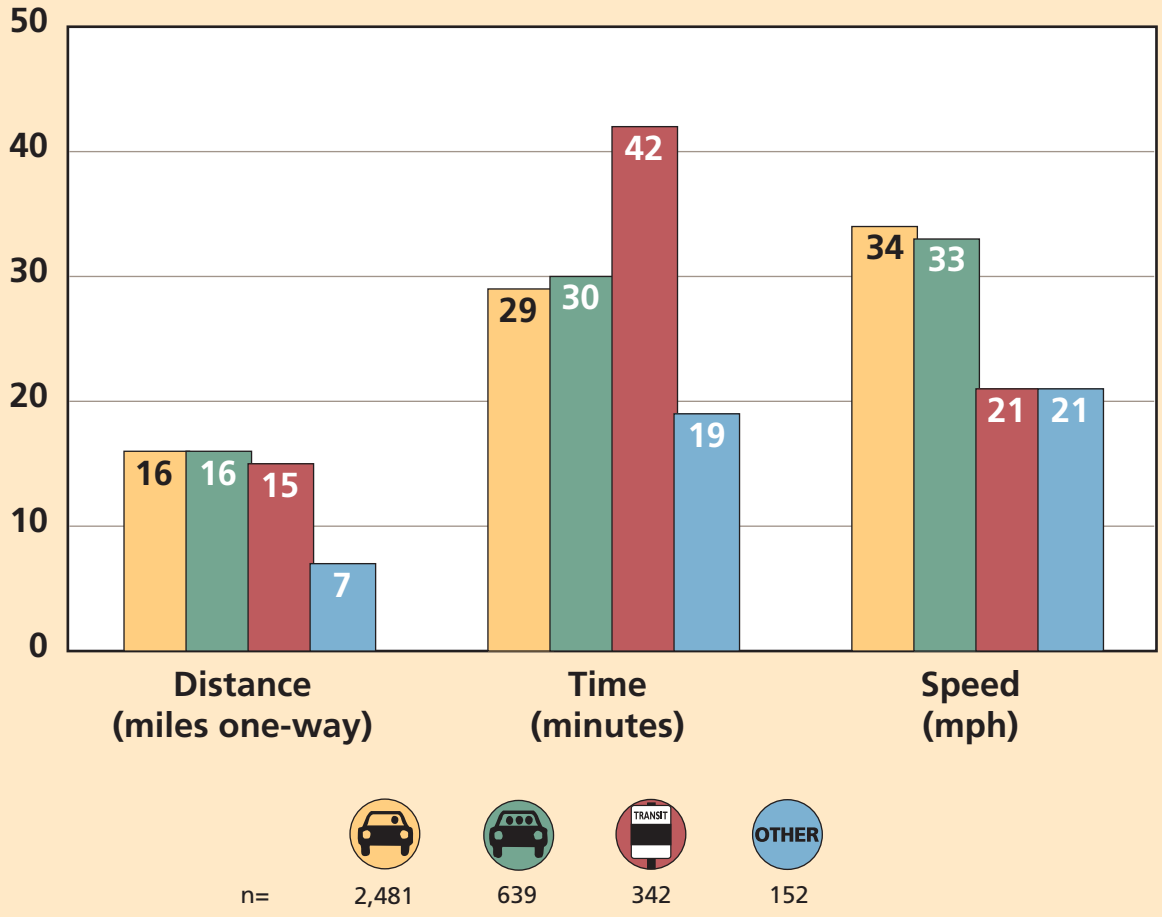
*smaller sample sizes

Travel characteristics vary considerably between auto-based modes and non-auto modes (Figure 7). Commuters who drive alone and carpool have similar distance, time and speed characteristics.

Transit users travel a similar distance to the auto-based commuters, but do so at slower speeds. "Other mode" commuters travel shorter distances and do so at about the same speed as transit riders.

FIGURE 7

Travel Characteristics by Mode



County Comparisons

The Bay Area's less urbanized counties provide commuters with the fastest travel speeds (Table 7); Napa, Solano and Sonoma all average 36 miles per hour or greater. Commuters who live in San Francisco have the slowest travel speeds. Travel speeds over the last year have increased for seven of the nine counties. Only Napa and San Francisco respondents reported a small decrease.

The trend across most counties over the past eight years, however, is one of slower average speeds. Eight of nine counties experienced decreases in average travel speed ranging from one

How Bay Area Residents Commute

TABLE 7

Average Travel Speed (mph) by County

County	1996	1999	2000	2001	2002	Change 1996-2002
Solano	44	48	37	37	39	-5
Napa	43	45	38	39	37	-6
Sonoma	43	41	35	35	36	-7
Contra Costa	35	39	32	33	34	-1
San Mateo	37	34	31	30	34	-3
Santa Clara	36	32	29	26	32	-4
Alameda	35	34	30	28	30	-5
Marin	31	33	27	28	30	-1
San Francisco	21	25	20	24	23	+2

n=approximately 400 for each county each year

to six miles per hour. Although San Francisco commuters have the slowest average speed, they were the only commuters to report an increase in speed compared with eight years ago.

Start Time and Flexibility

For the first time, data were collected on the time respondents start work (Table 8). Predictably, the highest percentage of respondents start work between 8 a.m. and 8:59 a.m. More than 80% of respondents start work during the morning peak period (6 a.m. to 9:59 a.m.).

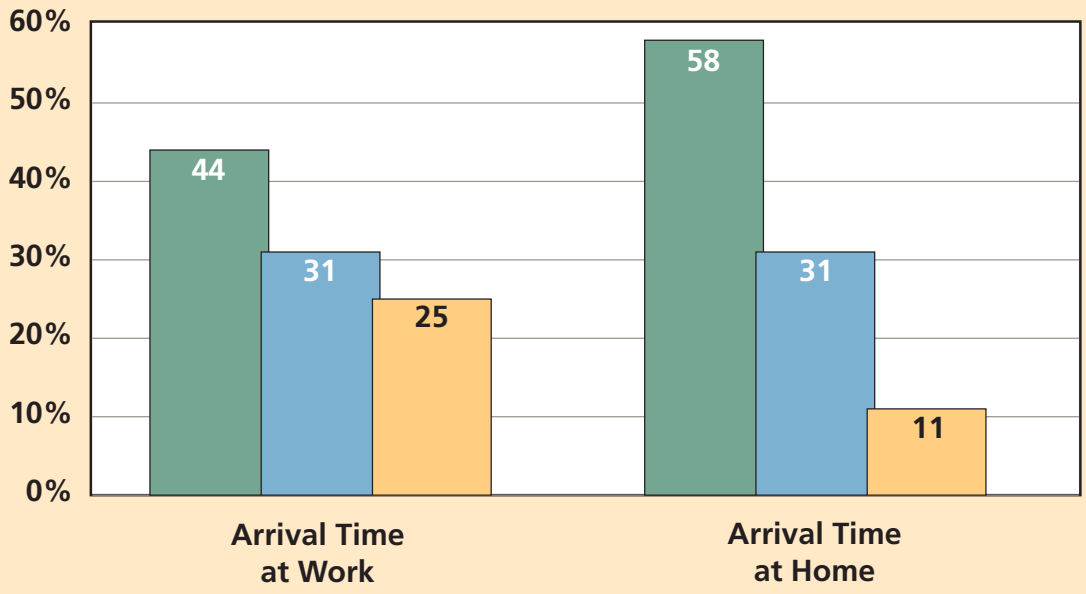
Respondents were also asked how flexible their arrival and departure times were (Figure 8). Arrival times at home are more flexible than arrival times at work. Almost 90% of respondents indicated their arrival time at home was "somewhat flexible" to "very flexible." Even though arrival times at work were less flexible than arrival times at home, only 25% of respondents indicated their arrival time at work was "not at all flexible."

Carpool Lane Use

Similar to previous years, about four of 10 commuters indicated a carpool lane exists along their route to work. Of those who have a carpool lane along their route to work, about 25% use the lane regularly to get to work. This means about 10% of all commuters use a carpool lane and most of them (85%) save time by using the lane. The amount of time respondents estimated saving decreased from the previous couple of years (Figure 9). From a high of 23 minutes recorded in 2001, the estimated

FIGURE 8

Flexibility of Arrival Times at Work and Home



n=3,614

TABLE 8

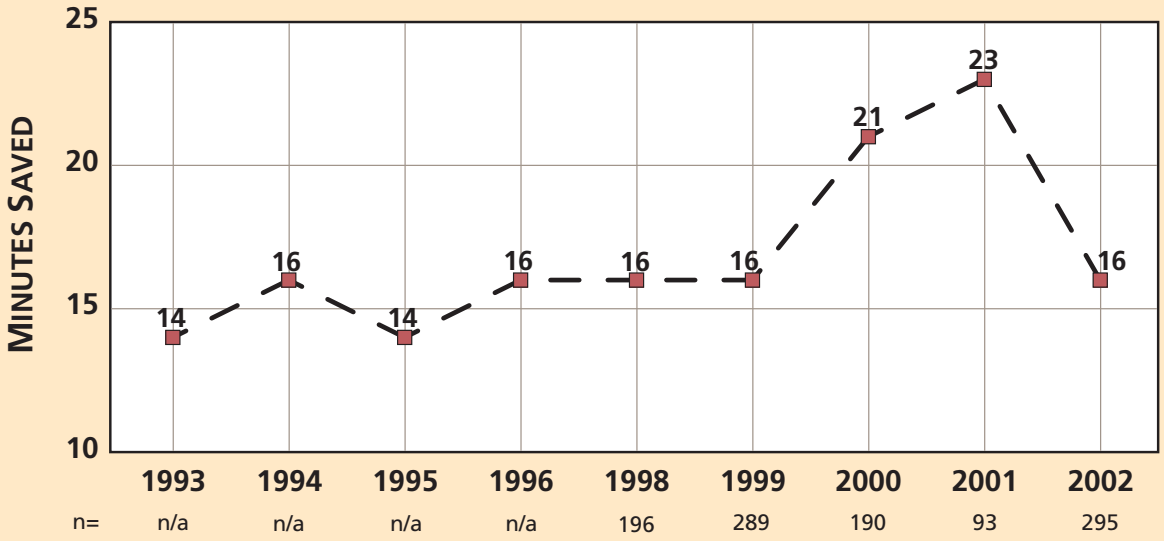
Work Start Time

6:00 – 6:59 am	9%
7:00 – 7:59 am	22%
8:00 – 8:59 am	34%
9:00 – 9:59 am	18%
10:00 am – 3:59 pm	8%
4:00 pm – 11:59 pm	3%
Midnight – 5:59 am	4%
Varies	3%
n=	3,614

How Bay Area Residents Commute

FIGURE 9

Minutes Saved (One-Way) by Using Carpool Lane



time saved this year decreased to 16 minutes—similar to 1999 and earlier. This is consistent with other data from the survey (reflecting a slow down in the economy) that show overall travel speed increasing and signs of congestion being less severe. The decreased amount of time saved by using the carpool lane may be related to the adjacent mixed flow lanes being less congested. Also consistent with the decrease in time saved was a decrease in the percentage of respondents who indicated that the carpool lane influenced their decision to carpool or use transit (Figure 10). Although fewer respondents indicated that the carpool lane influenced the decision to carpool or use transit, about the same percentage of commuters (58%) indicated they would continue with their carpool or transit mode even if the carpool lanes did not exist. About 29% indicated they would not continue if the carpool lane was gone.

County Comparisons

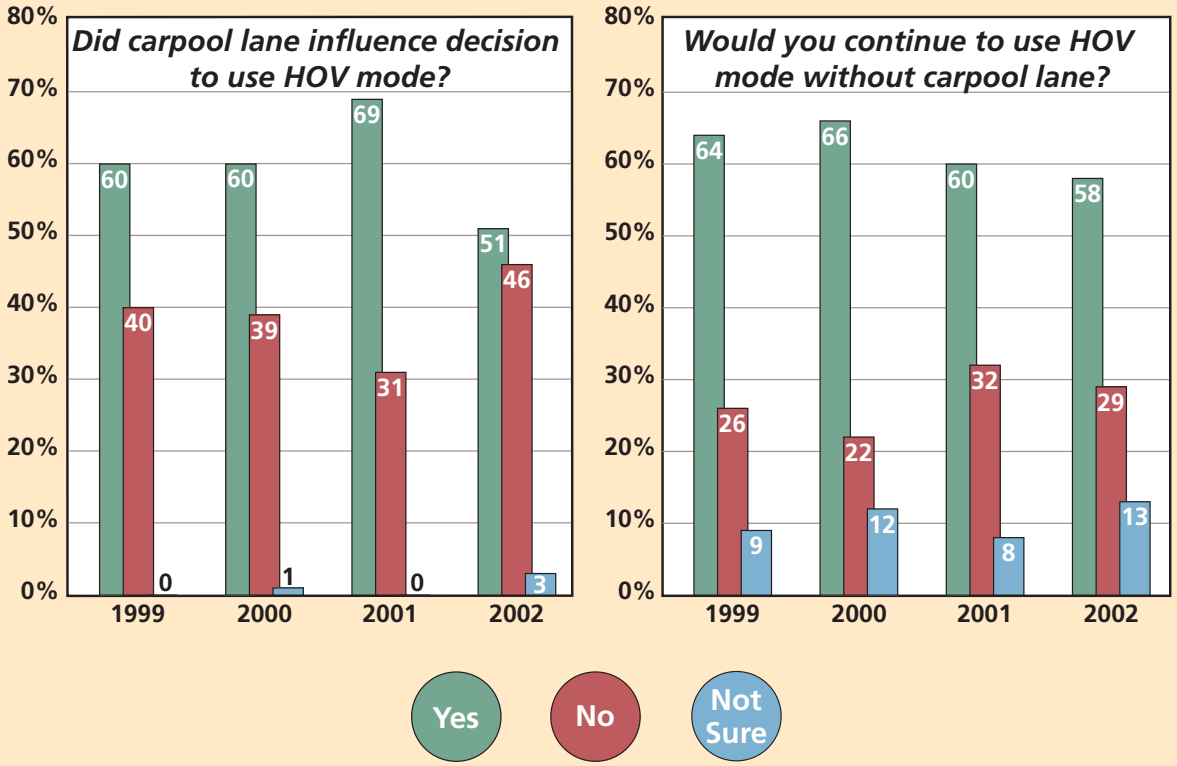
Commuters who start their trip in Marin (58%) and Santa Clara (53%) counties are most likely to have a carpool lane along their route to work (Table 9). Commuters who start their trip in Napa (15%) and Sonoma (18%) counties are the least likely to have a carpool lane along their route to work.

Of those commuters who have a carpool lane along their route, Sonoma and Solano residents are the most likely to use it. Solano County commuters make the longest trips and many of them travel along the congested Interstate 80 corridor where the carpool lane offers a significant advantage. They are also the most likely to indicate that the carpool lane saves them time (95%).

The question that elicited the most varied response (when looked at on a county-by-county basis) addressed the influence of the carpool lanes on a respondent's decision to carpool or use transit. Alameda (74%) and Solano (67%) residents were most heavily influenced by the presence of carpool lanes on their route to work. Respondents from these two counties were also most likely to save time on their commute as a result of

FIGURE 10

Carpool Lane and Commute Mode Choice



n=358

How Bay Area Residents Commute

TABLE 9
Carpool Lanes by County

	Access To Carpool Lane	Use of Carpool Lane	Save Time	Influence Decision
Alameda	40%	25%	91%	74%
Contra Costa	44%	26%	85%	50%
Marin	58%	25%	79%	59%
Napa	15%	25%	87%	33%
San Francisco	22%	22%	80%	20%
San Mateo	28%	19%	86%	55%
Santa Clara	53%	25%	82%	37%
Solano	34%	31%	95%	67%
Sonoma	18%	32%	87%	57%
n=	3,643	1,269	322	322

using a carpool lane. San Francisco and Napa residents were at the opposite end with only 20% and 33% respectively influenced by the presence of carpool lanes.

Carpool Composition

The average carpool size is 2.5 persons (including the driver). If vanpoolers are included in the calculation the average increases to 2.9 persons per vehicle. For vanpools only, the average is just over nine persons per van. Co-workers are the most common type of participant in a carpool (Figure 11). Casual carpoolers (i.e., carpools that are formed near transit stops on an informal basis with different drivers and passengers each day) make up approximately 5% of carpools. Over 60% of carpoolers have been participating in a carpool for over one year.

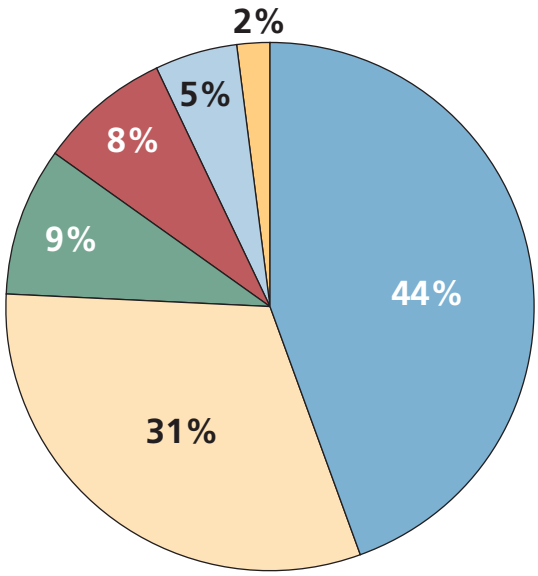
Telecommuting

Telecommuting is an option for 24% of respondents. This is a small increase over last year where 22% of respondents' employers provided the option to telecommute. Just over 80% of respondents who have the option to telecommute take advantage of it. Again this is similar but a little higher than past years. Of those who telecommute:

- 24% do so one day per month,
- 52% do so two to four days per month,
- 25% do so five or more days per month.

FIGURE 11

Carpool Composition



n=223

- Co-workers
- Household Members
- Friends or Neighbors
- Non-household Relative
- Casual Carpool
- Other

The average telecommuter does so about four and a half days per month. This is similar to last year but down a bit from previous years where the average was between five and six days per month.

Since one goal of telecommuting is to reduce vehicle trips, respondents were asked if they made more, the same or fewer trips on days when they telecommute compared with days when they commuted to work. Table 10 shows an increase from last year in the number of respondents making fewer trips. Although there have been changes from year to year, there has been considerable consistency within each range of trips made. Most telecommuters make fewer trips on days that they telecommute.

TABLE 10

Trips Made on Telecommuting Days

	1998	1999	2000	2001	2002
Fewer	60%	67%	74%	57%	69%
Same	35%	24%	20%	31%	22%
More	5%	9%	7%	13%	9%
n=	159	674	645	571	726

REGIONAL PROFILE
TRAVEL MODE CHOICE

This section looks at why commuters choose specific modes, changing commute conditions, the ease of using specific modes, parking and employer incentives.

Why Commuters Choose Specific Modes

Respondents were asked in an open-ended format to describe their reasons for using their primary commute mode. The responses are shown in Tables 11-14 for each of the four clustered mode categories—drive alone, carpool, transit and "other." In past years, "convenience and flexibility" and "no other way to get to work" were commonly cited reasons. Because of the general nature of these responses, this year's survey probed for more specific responses—answers that would be more valuable in an attempt to understand the appeal of specific modes. The reasons cited for using each of the four clustered modes showed considerable variation between modes.

By probing beyond the convenience and flexibility associated with driving alone, the survey was able to identify obstacles to using alternative modes. When drive-alone commuters evaluated their options, four key reasons why alternatives did not work for them emerged. "No one to carpool with" was the most commonly cited reason. Contributing, it would seem, to the difficulty of carpooling or using transit were "irregular work hours and work schedules" that made driving alone more attractive. The lack of practical transit options was the third most commonly cited reason. Just over 10% of drive-alone commuters needed a vehicle for work.

The reasons carpoolers cited were the most dispersed of the four clustered mode groups; nineteen reasons were cited by one percent or more. For carpoolers, the lack of practical transit options and the need to transport kids[7] were the two most commonly cited reasons for carpooling. Like drive-alone respondents, carpoolers also cited their "work hours or work schedule" as an important reason for them choosing this mode.

Not owning a car was the single most commonly cited reason among transit commuters. About 95% of Bay Area commuters own a car. The cost of commuting was the other reason that clearly distinguished transit riders from drive-alone commuters. The cost of commuting was the top reason cited last year among this group. Comfort, relaxation and parking were also key reasons cited by transit users.

[7] Respondents who initially indicated that they drive alone, but later indicated that they have others in the car with them three to five days per week were reclassified as carpools.

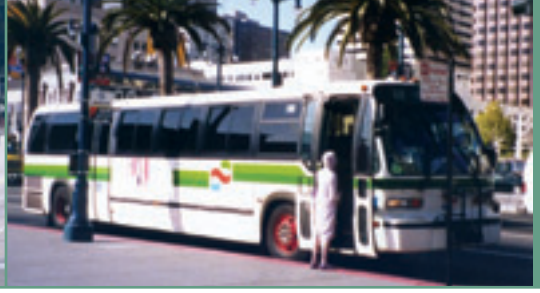


TABLE 11

Reasons for Driving Alone

No one to carpool with	22%
Work hours/work schedule	18%
No practical transit options	14%
Need vehicle during work	11%
Comfort/relaxation	8%
Travel time to work	8%
Privacy	4%
Need vehicle before/after work	4%
Driving is easiest and fastest	4%
Not being dependent on others	2%
Commuting costs	1%
Need vehicle to transport kids	1%
Come and go as I please	1%
Like to drive	1%
Other	2%
n=	2,465

TABLE 12

Reasons for Carpooling

No practical transit options	15%
Need vehicle to transport kids	15%
Work hours/work schedule	12%
Comfort/relaxation	10%
Travel time to work	11%
Commuting costs	6%
Need vehicle during work	6%
Need vehicle before/after work	5%
Don't own a car	3%
To use carpool lanes	2%
Privacy	2%
Not being dependent on others	1%
Parking availability/cost	1%
Enjoy company	1%
Environment	1%
Stress	1%
Other	6%
n=	639

TABLE 13

Reasons for Using Transit

Don't own a car	19%
Comfort/relaxation	17%
Parking availability/cost	13%
Commuting costs	13%
Travel time to work	12%
Work hours/work schedule	4%
Enjoy company	4%
Environment	4%
Stress	2%
Safety	1%
Other	10%
n=	342

TABLE 14

Reasons for Using "Other Modes"

Travel time to work	25%
Comfort/relaxation	20%
Don't own a car	9%
No practical transit options	7%
Commuting costs	6%
Work hours/work schedule	6%
Environment	5%
Need vehicle during work	4%
Parking availability/cost	3%
Stress	3%
Need vehicle before/after work	1%
Enjoy company	1%
Safety	1%
Other	9%
n=	141

Travel Mode Choice

OTHER

For users of "other modes," such as bicycling and walking, two responses dominated their list of reasons. Travel time to work was cited by one of four respondents and comfort/relaxation was cited by one of five respondents. Other reasons that were commonly cited by this group include not owning a car and the lack of practical transit options.

Changing Commute Conditions

This may come as a bit of a surprise to individuals who are reading this report while stuck in traffic, but commute conditions are getting better compared with a year ago (Figure 12). Not only has the percentage of commuters indicating that commute conditions have improved increased (from 14% to 29%), but the percentage indicating that conditions have gotten worse has decreased (from 43% to 25%). This is the first time since these questions were introduced in 1999 that the "better" response is greater than the "worse" response. The three previous years have been consistent—this year shows a change. While there may be a number of factors contributing to this such as improved transit and roadways, it is likely the slower economy, fewer jobs and consequently fewer commuters are making conditions relatively better.

Last year, topping the list of reasons for improved commute conditions was a "change in home or job location." This reason has been clearly bumped to

FIGURE 12

Commute Conditions

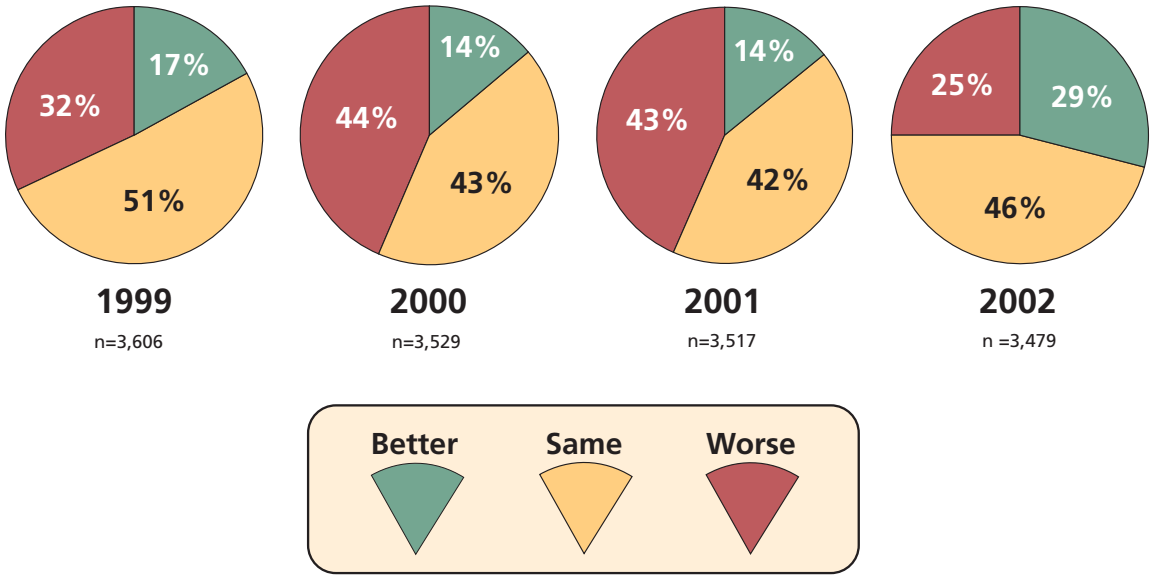


TABLE 15

How Commute Has Gotten Better or Worse

Better		Worse	
Traffic lighter	60%	Traffic heavier	67%
Moved home/job location	15%	Construction delays	13%
Roadway improvements	8%	Transit slower/crowded	5%
Changed mode	5%	Moved home/job location	4%
Changed route	4%	Road work	4%
Travel at different time	4%	Changed route	2%
Better transit service	3%	Travel at different time	2%
Less road work	1%	Changed mode	2%
Other	1%	Other	3%
n=	990		871

second place by respondents telling us that "traffic is lighter" (Table 15). Between 1999 and 2000 the trend was beginning to emerge as the percentage mentioning lighter traffic had moved from 16% to 26%. This year it jumped from 26% to 60%. For those whose commute had gotten worse, "heavier traffic" was once again the most commonly cited reason—dominating the category as in previous years. However, in the last two years it has been in the mid- to lower-70% range. Both the number of commuters indicating conditions are worse and the percentage of those commuters indicating traffic is heavier have declined.

Table 16 compares changes in commute conditions for each of the four clustered

TABLE 16

Change in Commute Conditions by Mode

				
Better	30%	29%	26%	29%
Worse	26%	28%	18%	20%
Same	45%	43%	56%	51%
n=	2,396	625	325	133

Travel Mode Choice

commute modes. For the past few years, carpoolers, transit riders and "other mode" users were more likely to indicate that their conditions had improved. This year drive-alone commuters are equally as likely to indicate that their conditions have improved. Overall there is much less variation by mode than in past years. The relatively lighter traffic has made driving alone more attractive and to some extent put other options (that relied on congestion for an advantage) at more of a disadvantage.

County Comparisons

In all counties, a higher percentage of respondents reported improved conditions compared with last year (Figure 13). Commuters who live in Santa Clara and Alameda counties were most likely to report that commute conditions had gotten better. The biggest improvements were in Santa Clara (+23 percentage points indicating conditions were better than a year ago), Alameda (+17 percentage points) and San Mateo (+17 percentage points). Commuters who live in Napa and Sonoma counties were the least likely to report improved conditions. It appears likely that there is a connection between changes in employment within counties and perceptions of commute conditions within those counties.

Respondents from eight of nine counties were less likely to report "worse" conditions. The biggest changes were in San Mateo (-24 percentage points indicating conditions were worse than a year ago) and Santa Clara (-23 percentage points). Solano County residents were the only respondents to report a small increase in "worse" conditions. Along with Solano, Napa and Sonoma respondents were the most likely to report that conditions had gotten worse over the last year.

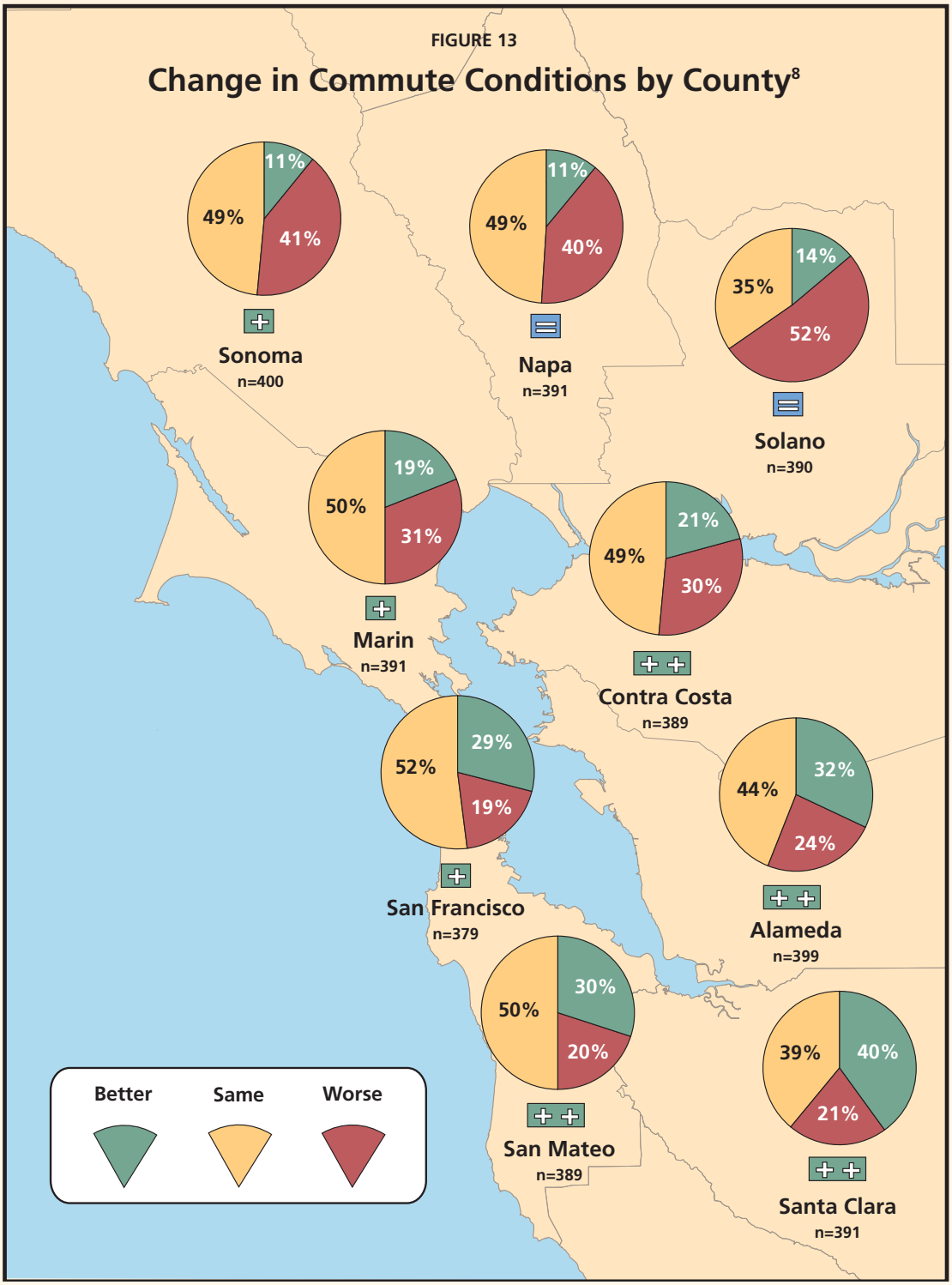
Ease of Using Specific Modes

For the second year, respondents were asked if it is easier, about the same or more difficult to use specific modes now than it was a year ago. Only individuals who were currently using transit, carpooling or bicycling to work were asked these questions. Carpoolers and bicycle commuters were the most positive this year about the use of their modes (Figure 14). The percentage of respondents indicating that it was easier now than a year ago increased by 11 percentage points for carpoolers and 18 percentage points for bicyclists. Although the percentage of transit riders indicating that it was easier declined slightly, there was a bigger drop in the percentage reporting that it was more difficult to use transit. Overall, the changes between this year and last year can be characterized as positive (i.e., alternatives to driving alone are relatively easier to use among commuters currently using them).

For those respondents who indicated that using transit, carpooling or bicycling was easier or more difficult, a follow-up question was asked to determine why their experience had changed. The most

FIGURE 13

Change in Commute Conditions by County[8]

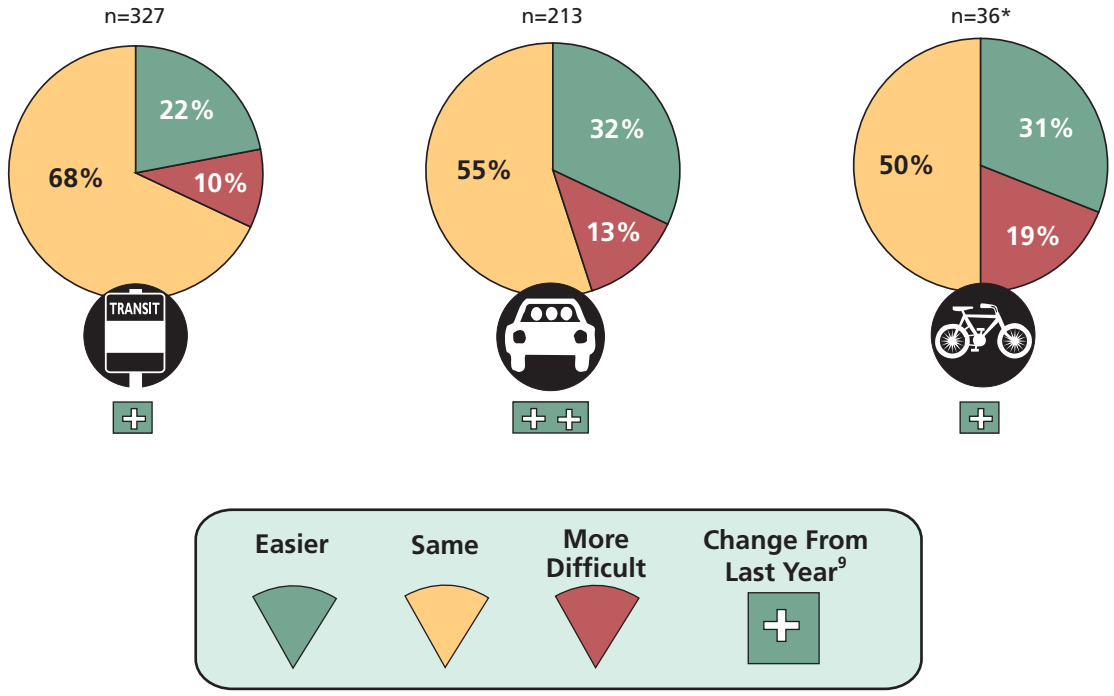


[8] Comparisons range from (++) to (--) with (++) being much better conditions, (=) being about the same as last year and (--) being much worse than last year.

Travel Mode Choice

FIGURE 14

Ease of Using Transit, Carpooling and Bicycling for Work Trip



*small sample size

frequently cited reasons are shown in Figure 15. Service reliability and frequency dominated the positive transit responses. The availability of partners was the dominant positive response and increasing traffic was the most common response for respondents who felt carpooling had become more difficult. New bike lanes and less space to ride were cited (by the few bicyclists surveyed) with positive and negative experiences respectively. The categories cited are similar to last year.

[9] Comparisons range from (++) to (--) with (++) being much better conditions, (=) being about the same as last year and (--) being much worse than last year.

FIGURE 15

How Using Transit Has Gotten...		
EASIER	• Service reliability or frequency has improved • New service has been added • Better information available	n=78
MORE DIFFICULT	• Service is less reliable • Service is less frequent	n=34

How Carpooling Has Gotten...		
EASIER	• More people to share rides with • Changed location • Changed schedule	n=62
MORE DIFFICULT	• Traffic is worse • Partners no longer available • Can't use carpool lane	n=30

How Bicycling Has Gotten...		
EASIER	• Changed location • New bike lane	n=11
MORE DIFFICULT	• Less space to ride on streets • Traffic is worse	n=5

Parking and Employer Incentives

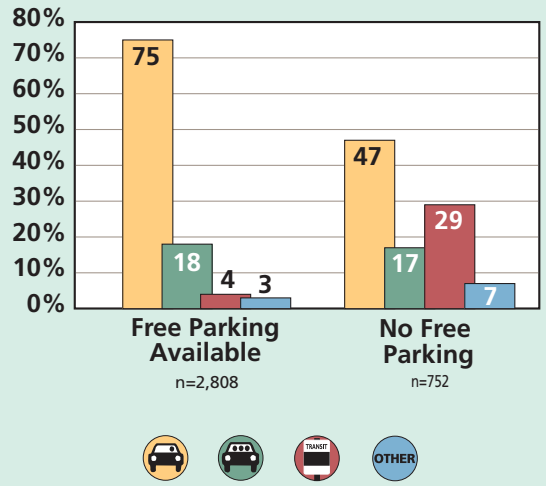
Almost eight of 10 respondents (78%) have free all-day parking available at or near their worksite—almost identical to previous years. The influence on mode choice of destinations with and without free parking is substantial.[10] Locations with free parking have a drive-alone rate of 75%, while those without free parking have a drive-alone rate of 47% (Figure 16). The contrast is similar to last year, but not as great as in years prior to 2001. The difference in transit use is even greater than the difference in the drive-

[10] Although parking is the variable identified here, other conditions associated with parking are likely to have an influence on mode choice. In other words, paid parking may not be the causative variable itself—it may simply identify areas with specific characteristics. For example, in areas such as downtown San Francisco where free parking is scarce, there is also more transit service, more amenities within walking distance of offices and significant local congestion. The combination of conditions is what most likely influences behavior rather than any single factor.

Travel Mode Choice

FIGURE 16

Free Parking and Travel Mode



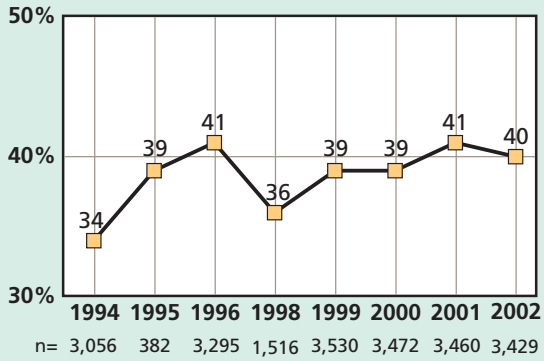
alone rate. For those with free parking, the transit use rate is 4%; for those without, it jumps to 29%. There is little difference in the use of carpools. The effect of paid parking (and the services associated with densely populated job centers) on the choice of travel mode is substantial.

The percentage of employers who encourage employees to use transit, carpool, bicycle and walk to work remained at a fairly high level in 2002 (Figure 17). *Commute Profile* data provide only a rough estimate of employer involvement because it is based on respondents' awareness and understanding of what their employer does. The sample is also designed to be representative of commuters from the nine counties so it is not necessarily a representative sample of all Bay Area employers. As imperfect as the data are, they do indicate that employers remain involved in providing commute assistance to their employees. The drive-alone rate is about 7% lower at employer sites where the use of alternatives is encouraged (Figure 18). This is up a bit from last year when the difference was only 4%, but closer to 2000 when the drive-alone rate was 8% lower at employer sites where the use of alternatives is encouraged.

Companies with 50 or fewer employees accounted for the largest percentage of respondents (Figure 19); over half (56%)

FIGURE 17

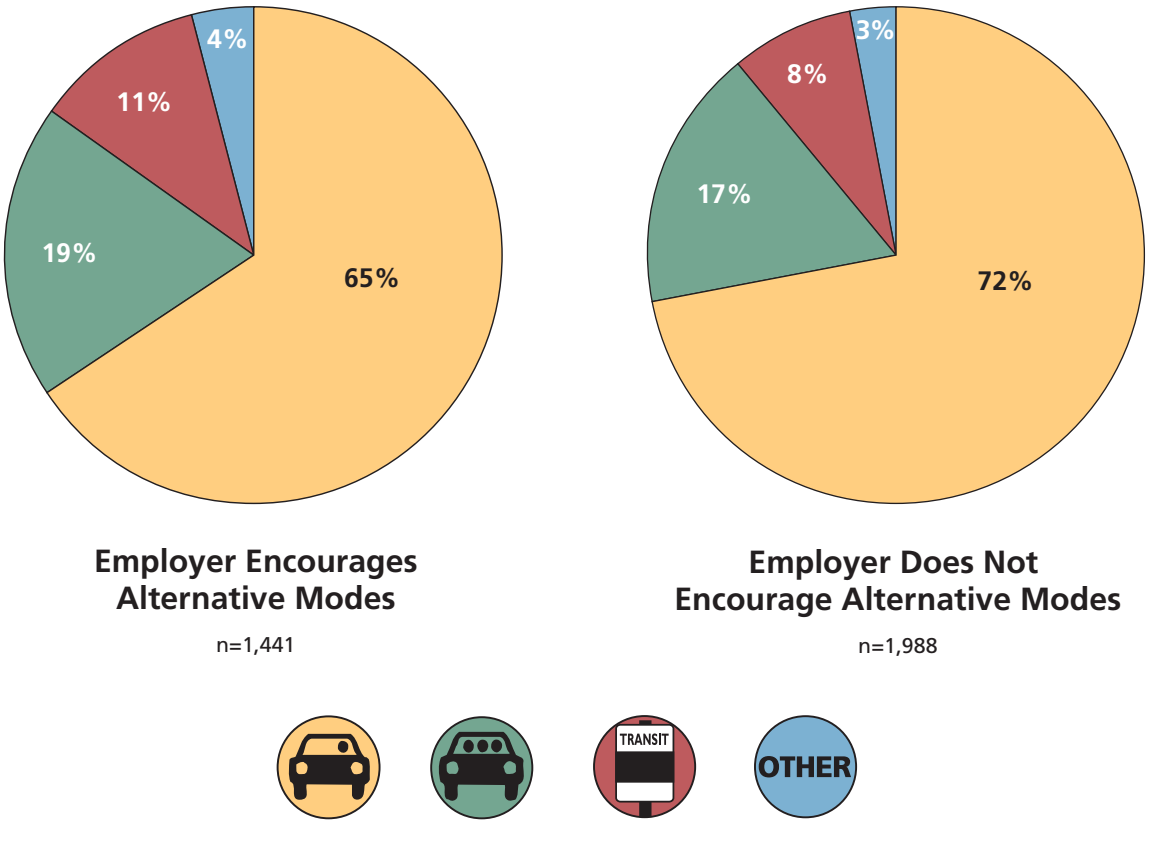
Employers Who Encourage Use of Commute Alternatives



of respondents work for employers with 100 or fewer employees. The likelihood that an employer will operate a program that encourages employees to use alternatives to driving alone increases with employer size. Less than a quarter of companies with 50 or fewer employees operate a commute incentive program while almost 70% of larger companies (more than 500) do something to encourage the use of commute alternatives.

FIGURE 18

Commute Modes With and Without Employer Encouragement



Employer Encourages Alternative Modes

n=1,441

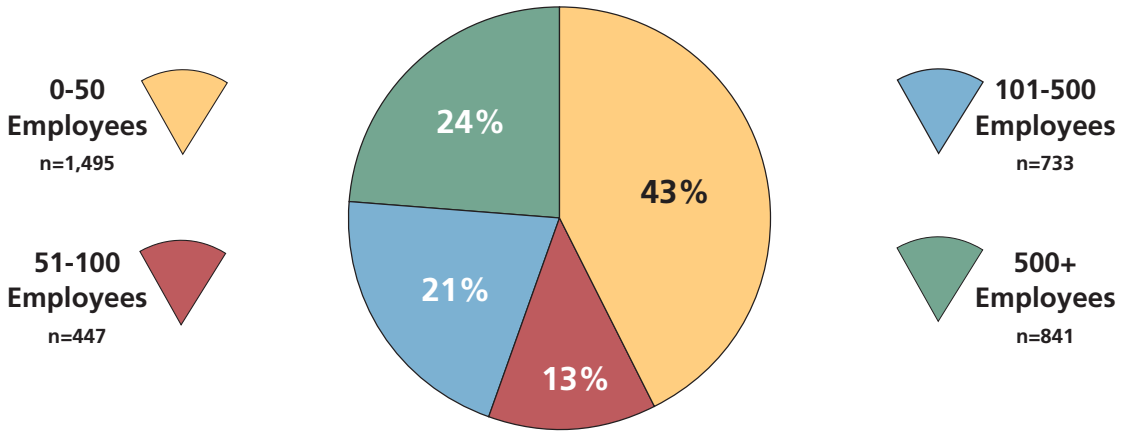
Employer Does Not Encourage Alternative Modes

n=1,988

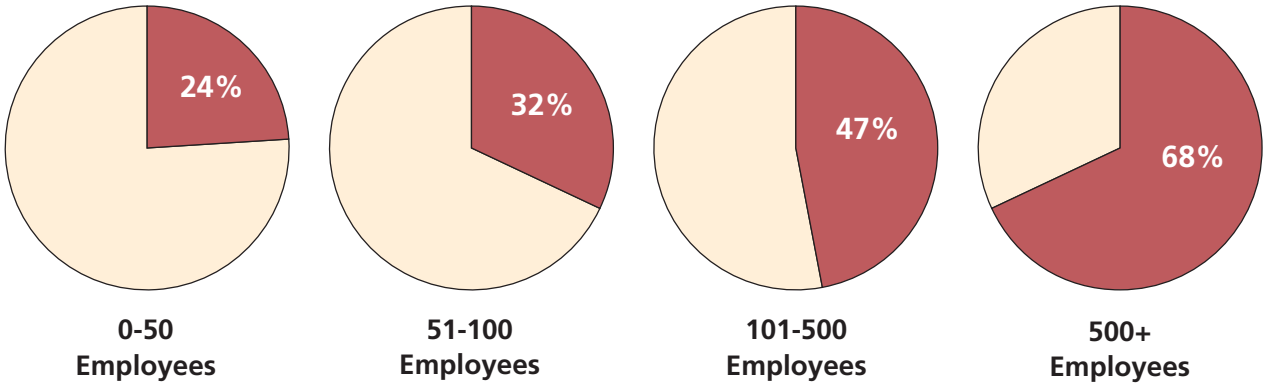
FIGURE 19

Employer Size

Respondents by Employer Size



Percent of Employers Encouraging Commute Alternatives



REGIONAL PROFILE
ASSESSING MARKET DEMAND

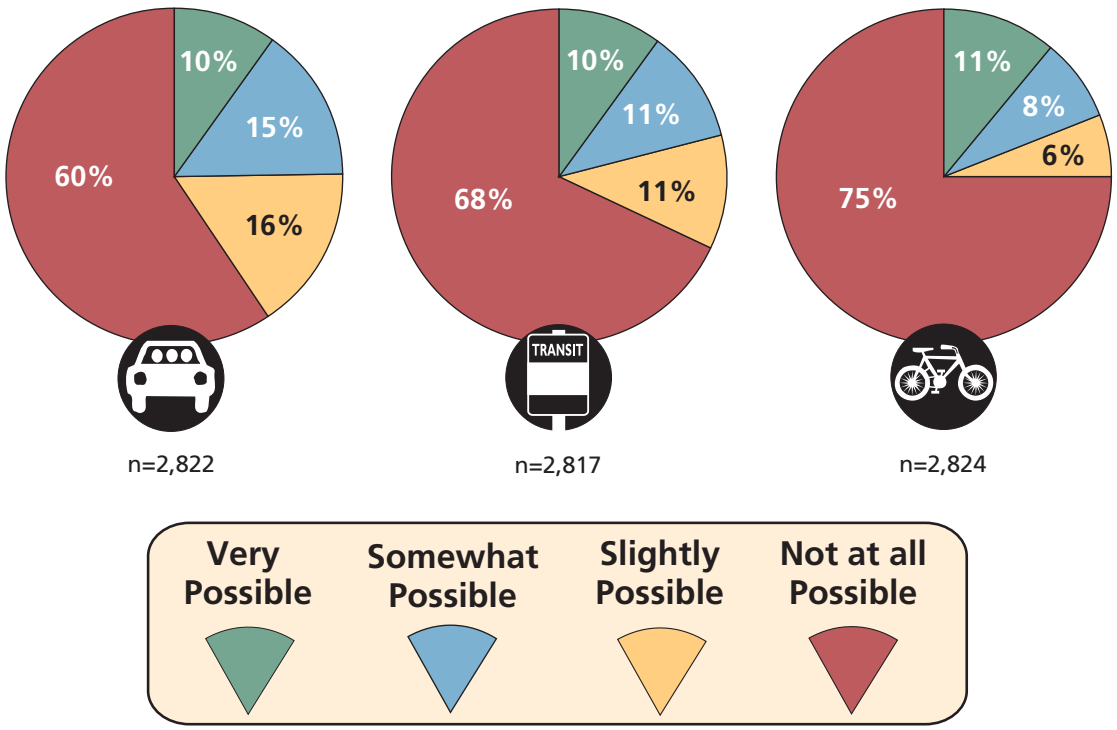
This section discusses the use of commute alternatives, characteristics of commuters more likely to use alternative modes, impediments to the use of commute alternatives and traffic and transit information.

Likelihood of Commute Alternative Use

Encouraging commuters who drive alone to try alternatives is a challenge. Drive-alone respondents to *Commute Profile* were asked how possible it would be for them to carpool, use transit or ride a bike to work at least one or two days a week. The challenge is highlighted by the results—most drive-alone commuters indicated it is "not at all possible" to try an alternative (Figure 20). Carpooling was the most popular of the proposed alternatives with approximately a quarter of respondents indicating it is "very possible" to "somewhat possible" for them to carpool one or two days a week.

FIGURE 20

How Possible Would it be to Use an Alternative Travel Mode



Assessing Market Demand

For the past three years, the percentage of respondents indicating that transit is "very possible" to "somewhat possible" has increased. In 1999, it was 13%; in 2000 it went up to 18% and in 2001 the "very possible" to "somewhat possible" categories combined went up to 22%. This year the response has leveled off at 21%. Respondents had similar thoughts on bicycling. The percentage of respondents indicating that bicycling was "very possible" to "somewhat possible" also went up considerably in 2000 and 2001. The 19% indicating it was "very possible" to "somewhat possible" to bicycle is about 1% less than last year.

From an optimistic perspective, one would focus on the smaller but still substantial percentage of commuters that indicated it might be possible for them to try an alternative. The challenge is to identify and effectively target these higher potential commuters.

Characteristics of Commuters Who Are More Likely to Use an Alternative

The *Commute Profile* survey offers some insights into which subgroups of commuters indicated a higher level of interest in the use of alternatives to driving alone. In addition to the demographic variables shown in Table 17, six other variables were examined to see if some subgroups were more likely than others to indicate that carpooling, riding transit or bicycling to work were possibilities for their commute. Those variables were:

- flexibility of arrival time at home and work,
- access to carpool lanes along route to work,
- availability of free parking at the worksite,
- size of employer,
- commute trip distance,
- county of origin.

Those respondents with a greater degree of flexibility in their work and home arrival times were more likely to indicate that carpooling or transit was a possible option for them. Access to carpool lanes did not seem to influence responses. Respondents without free parking at the worksite were more likely to indicate that transit was a possibility for their commute. Commuters who work for larger companies (over 100 employees) were more likely to see carpooling as a possible means to get to work. Employer size did not seem to influence individual's perception of using transit or bicycling to work.

Commute distance and likelihood of carpooling were examined last year and there appeared to be some patterns of higher and lower interest. The data from this year, however, show no difference in carpooling interest based on commute trip distance. The potential use of transit, on the other hand, shows a pretty clear pattern of declining feasibility with increased distance. Twenty-five percent of short distance commuters (five miles or less one way) indicated that using

transit was "very possible" to "somewhat possible" while only 14% of longer distance commuters (over 40 miles one way) indicated the same. The possibility of commuting by bicycle, as one might expect, declines precipitously with distance. Forty-two percent of short distance commuters (five miles or less one way) indicated that bicycling was a potential option, while only 4% of longer distance commuters (over 40 miles one way) indicated bicycling was "very possible" to "somewhat possible."

County of origin also seemed to influence, to some extent, respondents' feelings about their commute options. Commuters from Santa Clara and Alameda were most positive about carpooling and those from San Mateo were least positive. This differs from last year when commuters from Solano were most positive and those from Marin least positive. More similar to last year were San Francisco respondents' attitude toward the use of transit. San Francisco commuters, by a large margin, were once again the most likely to see transit as a possible commute option. Respondents from Solano and Napa were the least likely to view transit as a potential commute option. Attitudes toward bicycling were also very similar to last year. Napa residents showed the most interest and Contra Costa and Solano residents the least.

TABLE 17

Demographics of Higher Potential Alternative Users

	All Respondents	Higher Potential	Higher Potential (Transit)	Higher Potential
Income of $65K+	54% n=3,090	55% n=605	56% n=508	52% n=470
Gender Male/Female	53% / 47% n=3,614	58% / 42% n=698	56% / 44% n=586	62% / 38% n=521
<40 Under Age of 40	49% n=3,581	54% n=695	54% n=585	54% n=518

Assessing Market Demand

The demographic information collected in *Commute Profile* can provide some insights into higher potential customer groups also. Understanding the demographics of these higher potential groups is also helpful in developing a targeted approach to marketing services. Gender, age and income characteristics are summarized in Table 17. The differences in income levels between the three higher potential groups and respondents as a whole were minimal.

Respondents who felt carpooling was a potential option for their commute are more likely to be male and under the age of 40. These results are similar to but not identical to the last couple years. The main difference is that this year's results are less exaggerated; last year there was a twelve percentage point difference between "all respondents" under age 40 and those considered higher potential carpoolers. This year it is only five percentage points (i.e., 49% of all respondents are under age 40 while 54% of the higher potential carpoolers are under the age of 40). The gender difference compared with last year, on the other hand, is slightly greater (five percent this year compared with three percent last year).

Higher potential transit users are similar to higher potential carpoolers. They tend to be younger by the same margin as potential carpoolers and slightly more likely to be male—although not quite to the same extent as the carpool group.

The tendency for younger respondents to express more interest in alternatives to driving alone has been consistent for the last three years. The gender difference among higher potential transit users has been less consistent in past years.

The most pronounced difference in demographic characteristics shows up among potential bicycle commuters. While 53% of all respondents are male, 62% of the higher potential bicycle commuters are male; this is similar to last year where there was an eight percentage point difference between "all respondents" and those in the higher potential bicycle group. By the same margin as the carpool and transit groups, respondents who expressed a higher level of interest in bicycle commuting tend to be younger also.

Younger respondents and especially younger male respondents appear to be more likely to use commute alternatives based on their responses to questions that asked about their potential use of commute alternatives. How does the intention of respondents compare with their actual behavior?

Table 18 looks at current travel modes based on age and gender. Contrary to responses on potential use, females are more likely to currently be using a commute alternative, and carpooling appears to be their preferred mode. There is almost no difference in carpool use related to age for either males or

TABLE 18

Age, Gender and Current Travel Mode

			TRANSIT	OTHER
Males n=1,398	73%	14%	9%	4%
Under Age 40 n=938	68%	15%	12%	6%
Over Age 40 n=963	78%	14%	6%	2%
Females n=1,707	63%	22%	10%	5%
Under Age 40 n=821	61%	22%	12%	5%
Over Age 40 n=859	66%	21%	8%	5%

females. There does, however, appear to be a connection between younger males and the use of transit and "other modes." Transit use is double for younger males compared with older males and "other mode" use is triple when comparing these same groups.

Impediments to the Use of Commute Alternatives

While identifying some of the characteristics of the respondents most likely to try alternatives to driving alone is helpful for crafting and placing a message that will get their attention, it is also valuable to know what impediments need to be addressed to encourage the use of commute alternatives. The reasons commuters find it difficult to use alternatives to driving alone are shown in Table 19.

For potential carpoolers, finding partners and the flexibility needed to accommodate their irregular work hours topped the list of reasons why they find it difficult to carpool. For potential transit riders, the additional time required to make the trip and the lack of appropriate service are key deterrents. The need for a vehicle during the day and work schedules are additional factors that make using transit difficult

Assessing Market Demand

TABLE 19

Reasons for Not Carpooling, Riding Transit or Bicycling

Reasons For Not Carpooling		Reasons For Not Using Transit		Reasons For Not Bicycling	
Can't find partners	34%	Takes too much time	28%	Too far to ride	52%
Irregular work hours	22%	No service available	21%	Don't ride or own a bike	9%
Need car during work	12%	Need car during work	13%	Need car at work or before/after work	9%
Takes too much time	10%	Irregular work hours	10%	Takes too much time	8%
Transport children	5%	Transit unreliable	7%	Don't feel safe	8%
Desire privacy	4%	Transport children	5%	Never considered it	5%
Need car before/ after work	4%	Need car before/ after work	4%	Can't ride in work clothes	4%
Never considered	3%	Desire privacy	3%	Need to get in shape first	3%
Prefer to drive alone	3%	Never considered it	2%	No safe place to lock bike	2%
Work overtime	1%	Prefer to drive alone	2%	No place to change/ shower	2%
Other	1%	Don't know how to use	2%		
		Too expensive	1%		
		Safety	1%		
		Other	2%		
n=	2,097		2,185		2,234

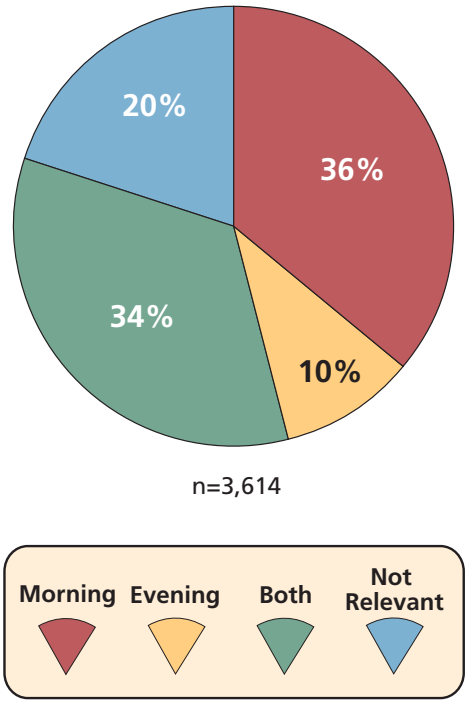
for some. Most commuters feel it is just too far to ride their bike to work. Even if commuters who travel 10 miles or less to work are selected, "too far to ride" is still the primary concern; the number of respondents giving that reason does, however, drop from 52% to 34%. Looking at respondents who travel five miles or less drops it to 27%, but it is still the most commonly cited single factor. The need for a car at work and not riding or owning a bike are additional impediments to bicycle commuting.

Traffic and Transit Information

A new series of questions in *Commute Profile* this year asked respondents about their use of traffic and transit information. For about three quarters of respondents, traffic information is most important for the morning commute, and for just under half of respondents it is important in the evening (Figure 21). For about 20% of respondents traffic information was not relevant to their daily travel decisions.

FIGURE 21

When is Traffic Information Most Important



n=3,614

The radio appears to be the most reliable source of traffic information for commuters (Table 20). Since most commuters are in a vehicle on their way to and from work and would, therefore, have access to a radio, it is not surprising that they are familiar with it as a source of traffic information. A high level of familiarity is likely to equate with a feeling of reliability.

It is interesting that respondents see the Internet and the phone as the least reliable sources of traffic information.

Access to the Internet has leveled off this year. In 1999, seven of 10 Bay Area commuters had Internet access. In 2000, that increased to eight of 10. Last year it increased to nine of 10 Bay Area commuters and this year it has held steady with approximately 90% of commuters having access at home or work. Last year the *Commute Profile* survey included questions about the use of the Internet for traffic and transit information. At that time, almost half of respondents were aware of transit and traffic information on the Internet. About 13% of commuters made some use of the Internet for this purpose and about 5% used it regularly—once a week or more. Compared with the previous year (1999), awareness of transit and traffic information on the Internet was up about 10% but actual use showed little change.

TABLE 20

Reliability of Traffic Information Sources

	Most Reliable Source	Least Reliable Source
Radio	67%	6%
Television	17%	18%
Internet	4%	30%
Phone	1%	17%
All the same	12%	30%
n=	3,614	3,614

Assessing Market Demand

Respondents were less sure about the reliability of transit information (compared with traffic information). About one in three did not have an opinion on the most reliable sources and almost half did not have an opinion about the least reliable sources (Table 21). It is not surprising that fewer respondents feel knowledgeable about transit information since they are less likely to use it on a regular basis (compared with drivers using traffic information). What is surprising is that when only the responses of regular transit riders are considered, the percentage without an opinion changes very little. Thirty percent still don't have an opinion of the most reliable source and 45% do not have an opinion on the least reliable source. For those who do have an opinion, the most reliable sources of transit information cited were radio, the Internet and printed materials. The difference between reliability of sources is less for transit information than traffic information in respondents' opinions.

Respondents were asked the type of trip for which transit information was most important. Their choices included "out of the ordinary trips" or "service disruptions affecting their daily commute" (Table 22). Over half of respondents indicated traffic information is most important to them for out of the ordinary trips. About a quarter of respondents indicated they never have a need for transit information.

TABLE 21

Reliability of Transit Information Sources

	Most Reliable Source	Least Reliable Source
Radio	25%	11%
Internet	18%	15%
Brochure/ Booklets	17%	13%
Phone	7%	13%
Don't Know	34%	47%
n=	3,614	3,614

TABLE 22

Trip Purpose and Transit Information

Out of the ordinary trips	29%
Service disruptions impacting commute	19%
Equally important for both	28%
Never	24%
	n=3,614

COUNTY PROFILES
INTRODUCTION

The purpose of the county section of *Commute Profile 2002* is to look at each of the nine Bay Area counties separately, make comparisons and identify trends. Data from each county is compared with data from previous years, the Bay Area region as a whole, and other individual counties. As discussed in more detail in the methodology section of the report, each county analysis is based on a sample of approximately 400 residents who are employed full-time outside the home. The data reviewed for each county are:

- Primary commute modes
- Connecting modes
- Clustered modes
- Commute distance and time
- Perceptions of commute conditions and options

The primary mode is the means of travel used for the entire or longest segment of an individual's commute. If respondents used more than one mode on their normal commute trip, they were asked to identify their additional or "connecting" modes of travel. The primary commute mode and clustered modes[11] give an overview of the most popular methods of commuting in each individual county. These differences are clearly influenced by factors such as the accessibility of transit, commute distances and the degree of traffic congestion in the county. The connecting mode data provides a more complete picture of all modes commuters use to make their trips to work each day. In general, a higher drive-alone rate in a county means fewer commuters use a connecting mode. Commute distance and time shows the trip distance, length of time and travel speed of an average commute. Average travel speed provides an indication of the levels of congestion (based on the assumption that slower speeds are indicative of greater congestion) respondents from specific counties experience.

The perceptions of commute conditions and options are also included for each of the nine counties. The purpose of this combination of information is to provide a general sense of how commuters in each county perceive their trips to work. It is not an "official" performance measure, but simply a summary of related data collected in *Commute Profile*. The perceptions of commute conditions and options include data from three separate survey questions. The first question was asked of all commuters, the second of drive-alone commuters and the third of commuters currently using alternatives to driving alone.[12]

- The first question asked all respondents whether they felt their commute had gotten worse, better or stayed the same during the past year. It is based on their overall perception of how or if their commute has changed.

[11] "Drive Alone" includes motorcycles and taxis; "carpool" includes vanpools; "transit" includes buses, trains and ferryboats; and "other" includes bike, walk and telecommute.

[12] It is important to note that because most respondents drive alone, the sample sizes for other subgroups (e.g., carpoolers, transit riders or bicyclists) may be small and, therefore, have higher margins of error.

County Profiles: Introduction

- The second question asked respondents who reported driving alone as their main commute mode how possible it would be to use a commute alternative. The percentage of those who responded that it would be somewhat to very possible to use one of the three basic modes (carpool, transit or biking) is included in the table.
- The third question asked respondents who were using a commute alternative whether their travel mode had become easier, more difficult or stayed the same in the past year. The percentage of commuters who reported their mode (either transit, carpool or bicycling) had gotten easier is included as part of this table.

The data in each of the three sections was compared to regional responses, as well as those from *Commute Profile 2001*. If the percentage of people who had a positive answer to any one of the questions was higher than the regional or *Commute Profile 2001* percentages, the county was awarded a positive (+) sign for improvement. If the percentages were lower, the county received a negative (–) sign, and if there was no difference an equal (=) sign was awarded. The signs were then added together to create an overall score for each county (Table 23). The purpose of this approach is to compare perceptions among commuters from the different counties, and is not meant to be a comprehensive analysis of the success of transportation facilities and services in each county.

TABLE 23

Perceptions of Commute Conditions and Options

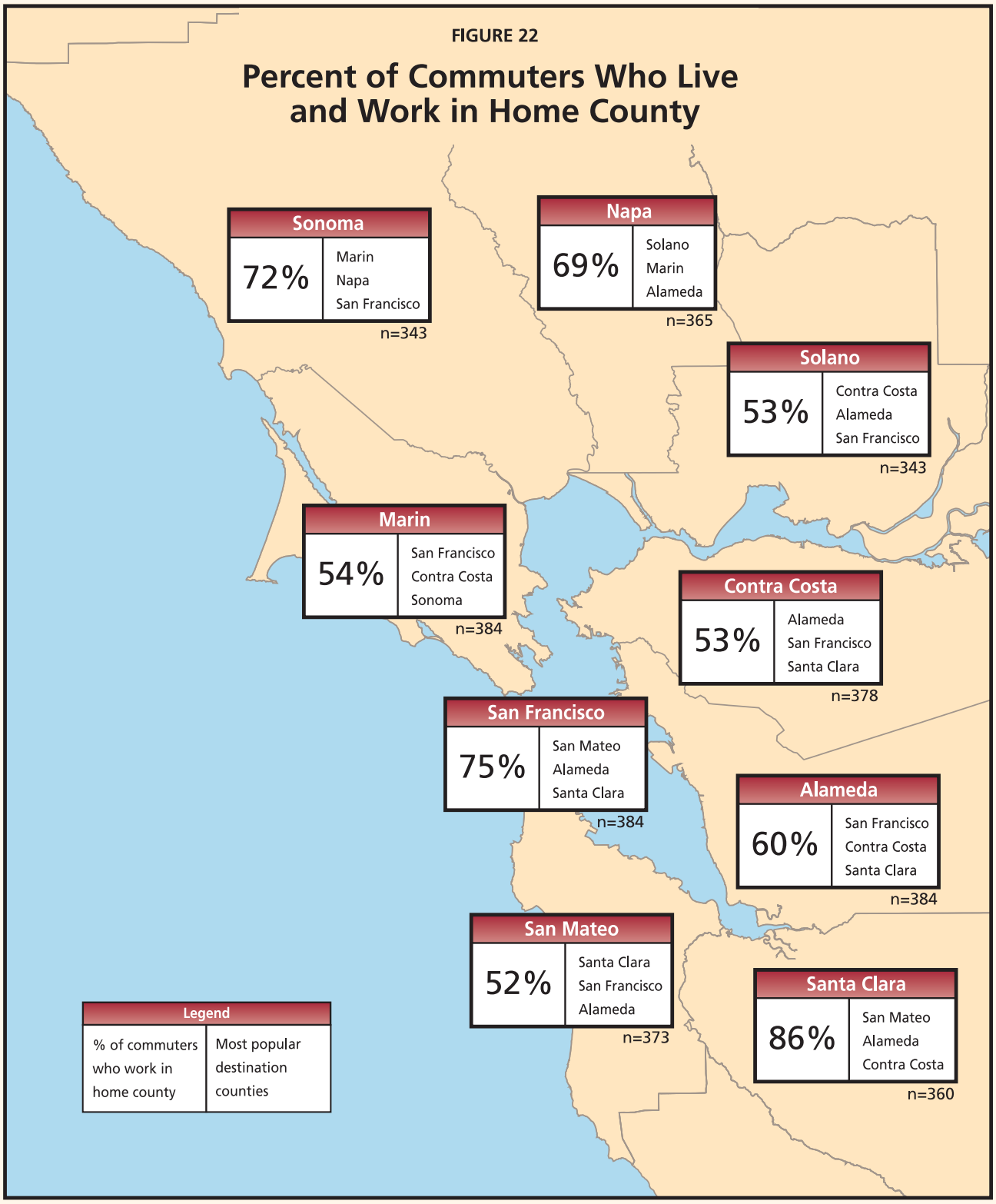
County	Summary Score 2001	Summary Score 2002
Alameda	+1	+5
Contra Costa	-3	-2
Marin	-1	+1
Napa	=	-4
San Francisco	+4	+2
San Mateo	-3	-1
Santa Clara	+5	+2
Solano	-2	-4
Sonoma	-4	+3

Origins and Destinations

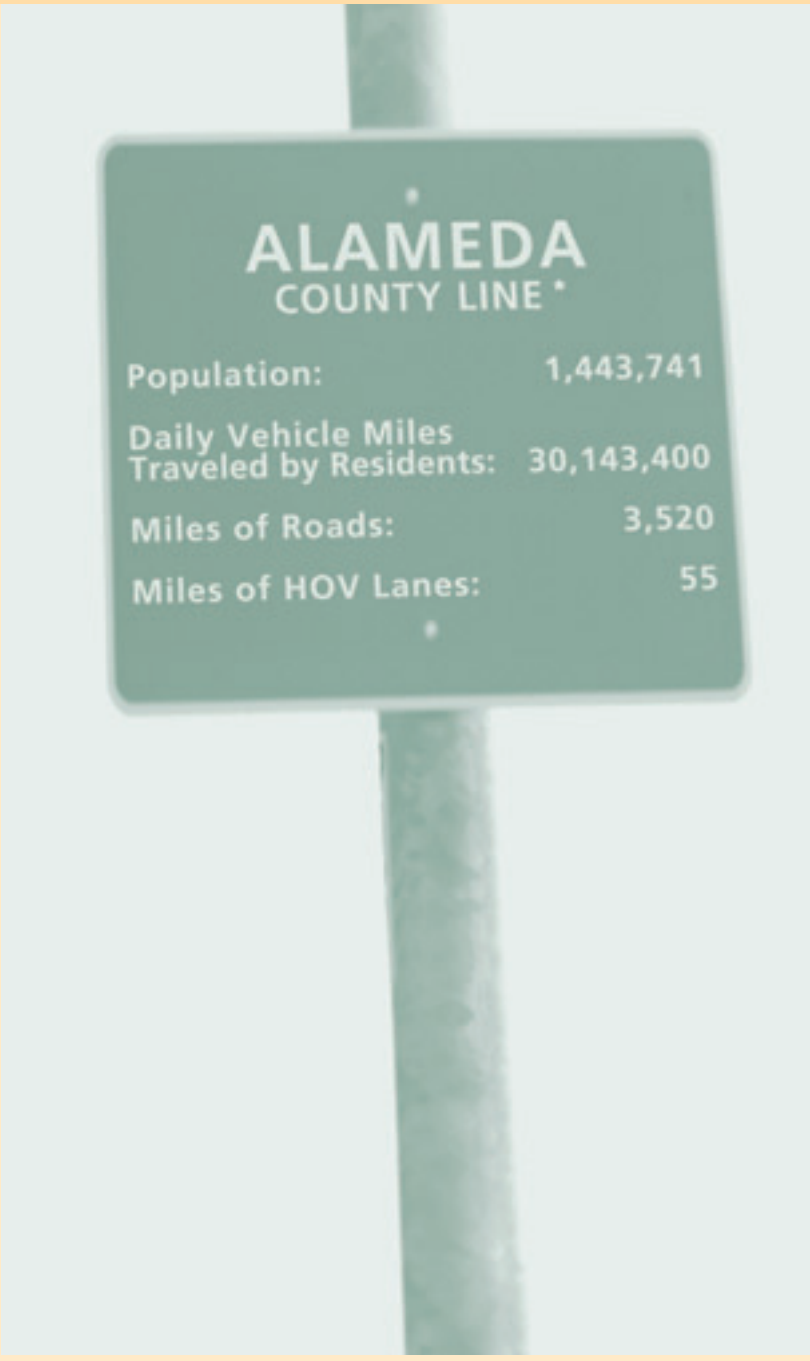
Santa Clara County has the highest percentage of residents who work and live in the same county (Figure 22). Marin, Contra Costa, Solano and San Mateo counties have the lowest percentages of residents who live and work in the same county. The order (i.e., which counties have the highest percentage working within the county where they live) is almost the same as last year. However, for eight of the nine counties the percentage living and working in the same county has increased from last year. Only Alameda remained the same; no counties showed a decrease. The increases ranged from three percent (San Mateo) to 12 percent (Solano). Figure 22 also shows the most common county destinations outside of a commuter's home county.

FIGURE 22

Percent of Commuters Who Live and Work in Home County



ALAMEDA COUNTY



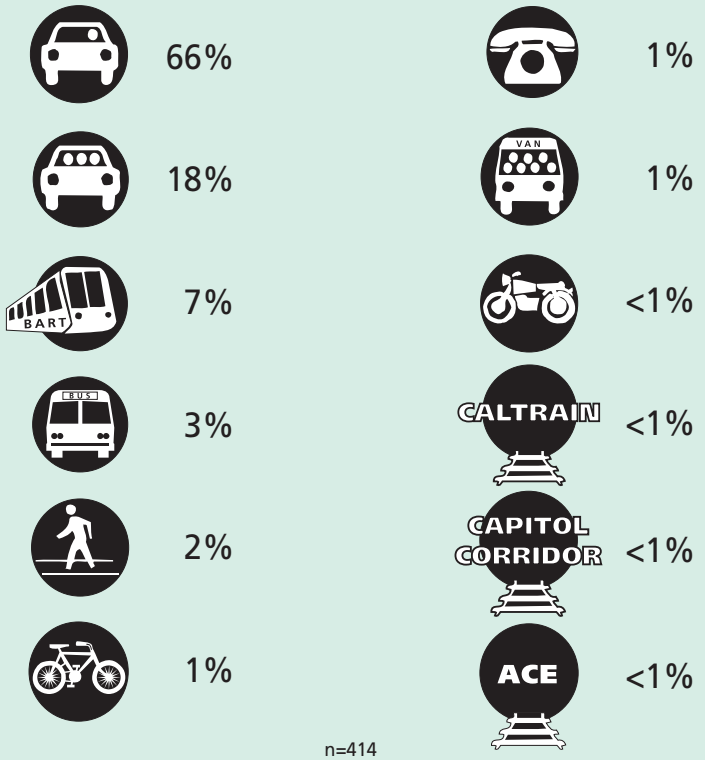
*See page 50 for footnotes.

Alameda County

The percentage of commuters who live in Alameda County and drive alone is the second lowest in the region (Figure 23); higher only than San Francisco and equal to Contra Costa. Alameda also has the second overall highest use of transit for commute purposes, and the highest percentage of BART commuters in the Bay Area. The rate of carpooling and vanpooling is higher than the regional average, and ties with Napa for third highest among the nine counties. Extensive transit service, clustered employment centers and highly congested roadways make the use of commute alternatives attractive and accessible.

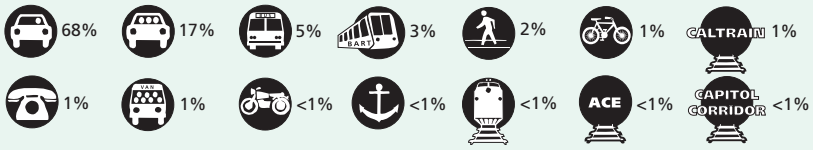
FIGURE 23

Primary Commute Mode



n=414

Regional Comparison



Over the past year, the number of drive-alone commuters in Alameda County has dropped slightly (Table 24). Carpooling has also decreased, while both transit and other mode usage have become slightly more popular. Alameda County residents who commute by transit mentioned not owning a car and the travel time to work as the reasons for choosing that mode. Carpoolers most often mentioned commuting costs, travel time and work schedule as their motivation for carpooling. Residents who drive alone to work were most likely to cite having no one to carpool with and a lack of practical transit options as reasons for their mode choice.

In comparison with the region, a slightly higher than average percentage of residents use a connecting mode in their daily commute (Table 25). Commuters who do not drive alone to work are more likely to need a connecting mode to complete their trip. Therefore, the fact that Alameda residents are more likely than those in most other counties to use a commute alternative has an impact on the number of connecting mode users.

TABLE 24

Clustered Modes Over Time

	1993	1994	1996	1999	2000	2001	2002
	62%	66%	65%	62%	63%	68%	66%
	14%	16%	15%	16%	14%	20%	19%
TRANSIT	17%	13%	13%	18%	20%	10%	11%
OTHER	7%	6%	7%	4%	4%	3%	5%

n=approximately 400 for each year

Alameda County

TABLE 25

Top Five Connecting Modes

ALAMEDA COUNTY

	4%
	3%
BART	3%
BUS	2%
	1%

TOTAL ALL 14%

n=59

REGION:					
	2%	2%	2%	2%	1%

TOTAL ALL 12%

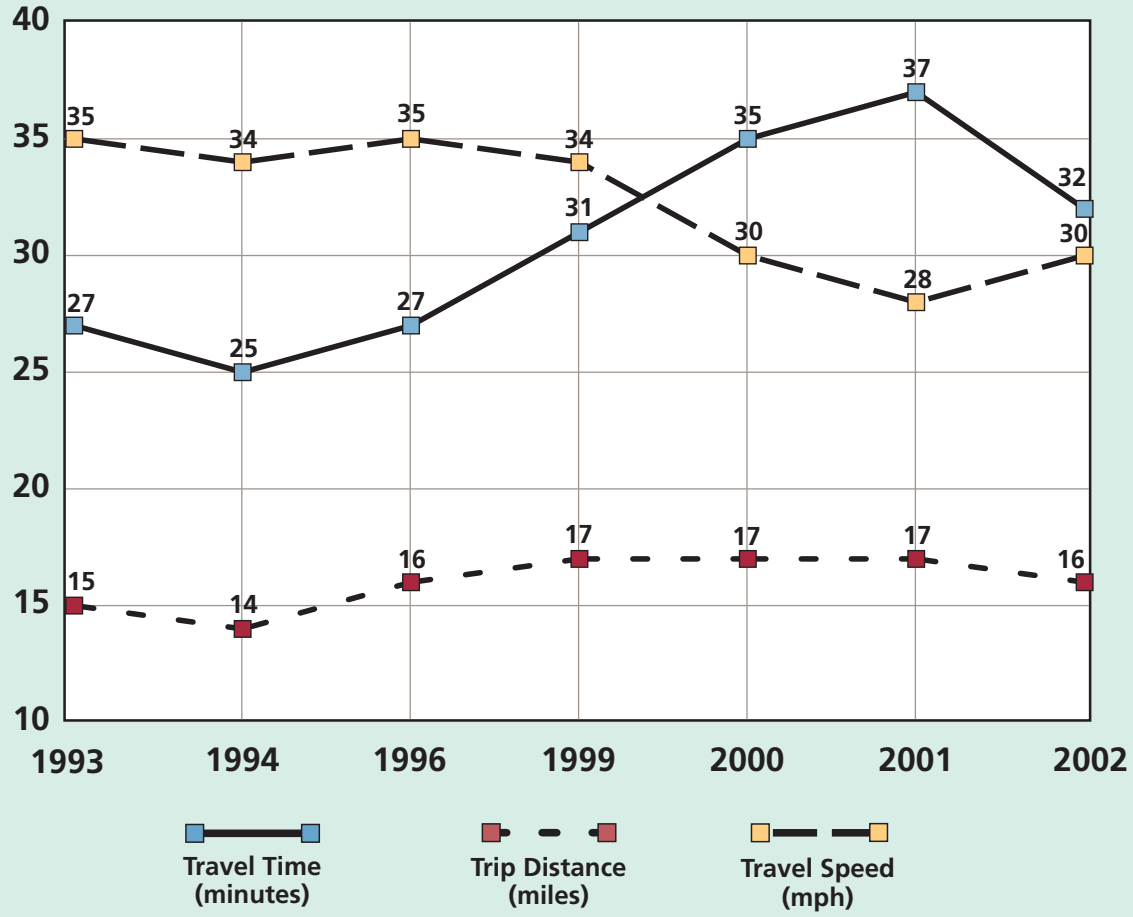
n=465

COMMUTE DISTANCE AND TIME

The average commute time decreased by five minutes and the commute distance decreased by one mile in 2002 (Figure 24). The result is an increase in speed of two miles per hour. Alameda County commuters travel the same distance as the average Bay Area resident, at a speed two miles per hour slower. This is partially a reflection of the high level of transit use in the region, which is generally slower than driving alone.

FIGURE 24

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

Alameda County residents have the most positive perceptions of changes in their commute options and conditions over the last year out of all Bay Area commuters (Figure 25). On average, they feel more positively about their commute options than other residents in the region. Approximately the same percentage of commuters in Alameda and the region

Alameda County

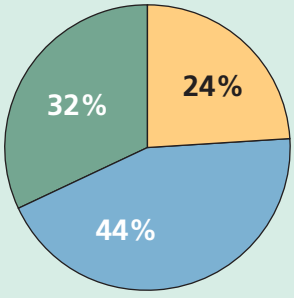
feel conditions have gotten worse. Sixty-three percent of those surveyed who said their commute had gotten worse attributed it to worsening traffic conditions.

Overall, perceptions of commute conditions within Alameda County have improved in the past year. More residents say their commute has gotten better, and more residents say using an alternative to driving alone is a possibility. Those who currently use an alternative were more likely to say their commute has gotten easier in the past year than they did in 2001. More than 50% of those who said it has become easier to use transit cited improved service in their area.

FIGURE 25

Perceptions of Commute Conditions and Options

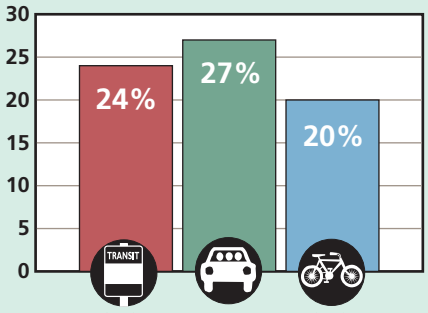
Has commute gotten better or worse?



n=399

Worse Same Better

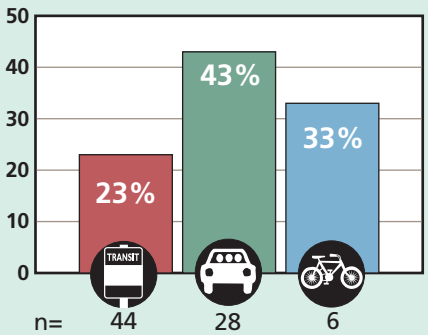
How possible would it be to use a commute alternative?



n= 313 312 310

Somewhat to Very Possible

Is it easier or more difficult to use a commute alternative compared with a year ago?



n= 44 28 6

Easier

Compared to region	=	**Compared to region**	+
Compared to 2000/2001	+	**Compared to 2000/2001**	+

Compared to region	+
Compared to 2000/2001	+

Overall 2002 Score: +5

Overall 2001 Score: +1

CONTRA COSTA COUNTY

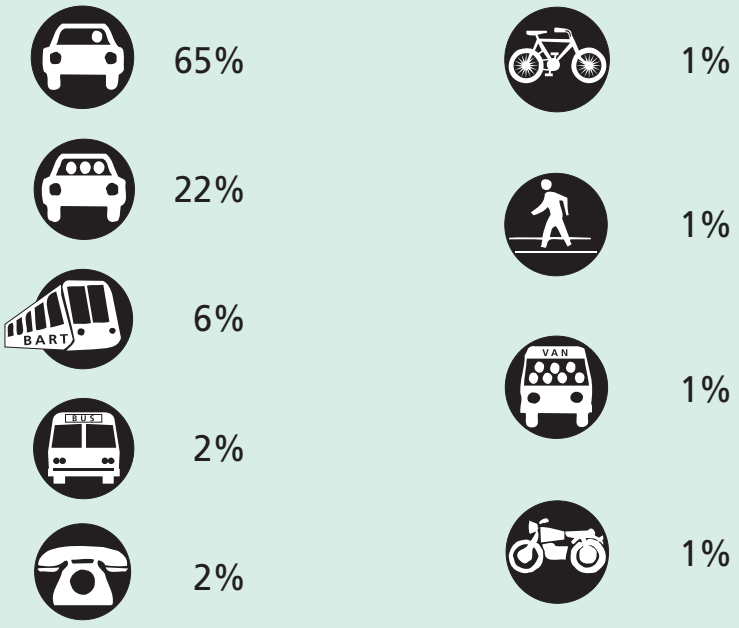
*See page 50 for footnotes.

Contra Costa County

Contra Costa County matches Alameda County with the second lowest drive-alone rate in the Bay Area (including motorcycles), higher only than San Francisco (Figure 26). As a result, the carpool rate is the highest in the region, five percentage points higher than the regional average. BART ridership is high, equal to San Francisco and lower only than Alameda County. An extensive incentive program promoted within the county provides residents and employees with additional reasons to carpool, vanpool or take transit.

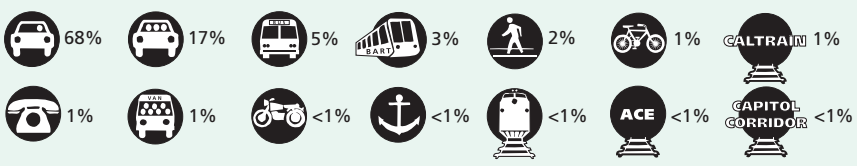
FIGURE 26

Primary Commute Mode



n=401

Regional Comparison



During the past year the percentage of drive-alone commuters has dropped from 70% to 66%, settling back at the same level as in 1999 and 2000 (Table 26). There has been a four percentage point increase in the number of commuters who are carpooling. The carpooling rate is now at its highest level since data collection for *Commute Profile* began. However, transit use has continued to decline. The most common explanations for difficulty using transit were that it takes too much time and a lack of adequate service.

Contra Costa residents are slightly more likely than the average Bay Area resident to use a connecting mode in their daily commute (Table 27). This is consistent with a relatively low drive-alone rate, since commuters using an alternative are more likely to need a connecting mode as part of their commute.

TABLE 26

Clustered Modes Over Time

	1993	1994	1996	1999	2000	2001	2002
	64%	69%	67%	66%	66%	70%	66%
	22%	17%	17%	13%	16%	19%	23%
TRANSIT	12%	12%	15%	16%	16%	9%	8%
OTHER	3%	2%	2%	5%	3%	2%	4%

n=approximately 400 for each year

Contra Costa County

TABLE 27

Top Five Connecting Modes

CONTRA COSTA COUNTY

BART	4%
	4%
	2%
	1%
BUS	1%

TOTAL ALL 13%

n=58

REGION:					
	2%	2%	2%	2%	1%

TOTAL ALL 12%

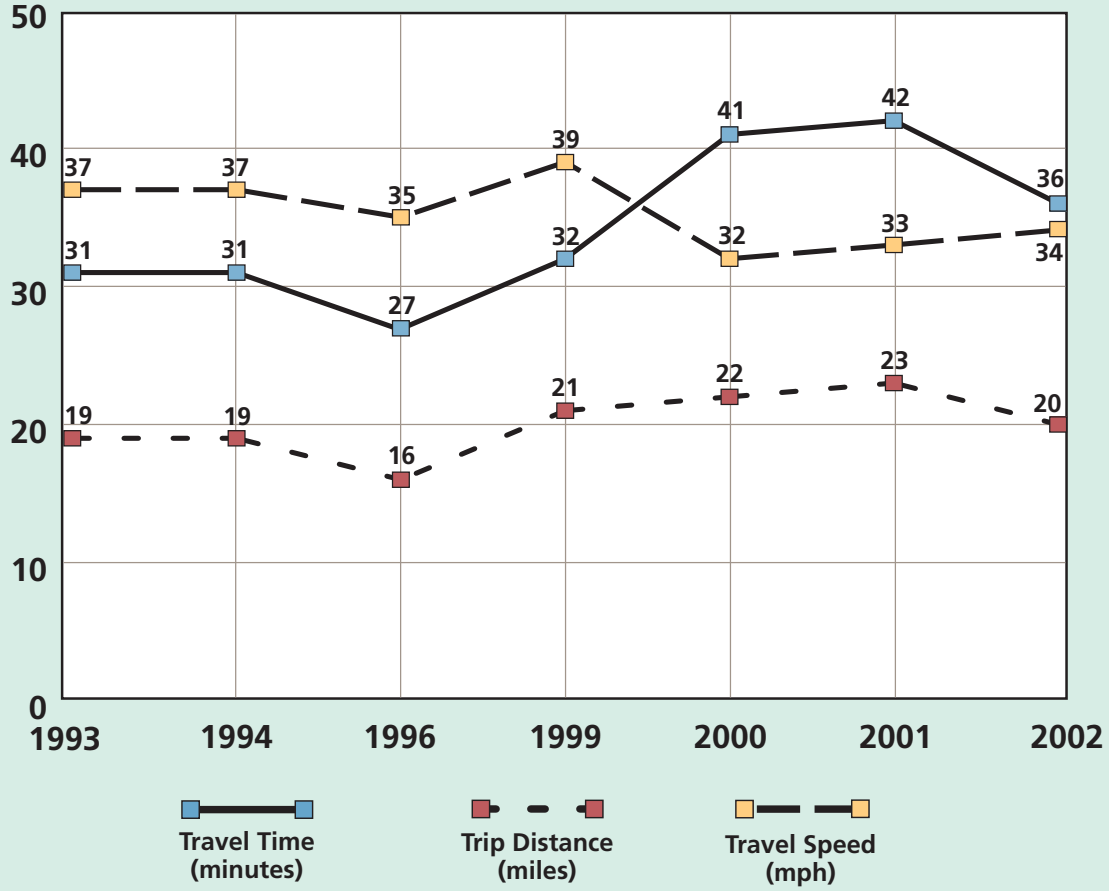
n=465

COMMUTE DISTANCE AND TIME

Until this year, both commute time and distance had been steadily increasing for Contra Costa residents since 1996 (Figure 27). The 2002 data documents a six-minute decrease in time and a three-mile decrease in distance. The outcome is a small increase in speed, as a result of travel time decreasing at a faster pace than mileage.

FIGURE 27

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

As in past years, Contra Costa residents are less satisfied with the commute conditions than the average Bay Area resident (Figure 28). However, the overall perception within the county has improved since last year. In 2001, 52% of respondents said their commute had

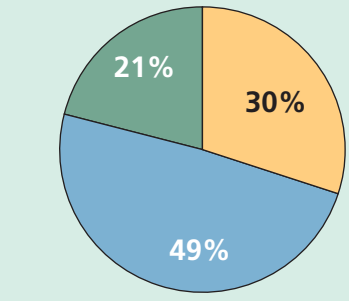
Contra Costa County

gotten worse. This year, only 30% felt that way. Forty-seven percent of the group who felt their commute had actually improved attributed the improvement to lighter traffic. The slowdown in the economy over the past year and a higher rate of unemployment is likely to have had an impact on traffic congestion. The four percentage point increase in carpool usage and decrease in drive-alone commuters is also likely to be having an effect on traffic, commute time and, therefore, overall satisfaction with commute conditions in the county.

FIGURE 28

Perceptions of Commute Conditions and Options

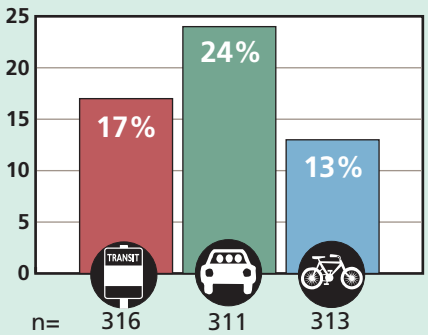
Has commute gotten better or worse?



n=384

Worse Same Better

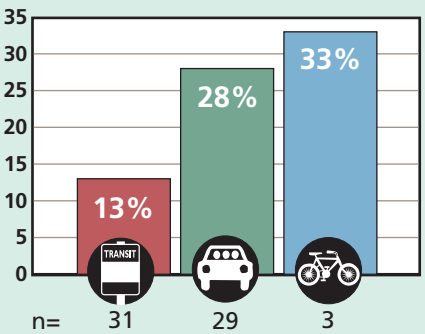
How possible would it be to use a commute alternative?



n= 316 311 313

Somewhat to Very Possible

Is it easier or more difficult to use a commute alternative compared with a year ago?



n= 31 29 3

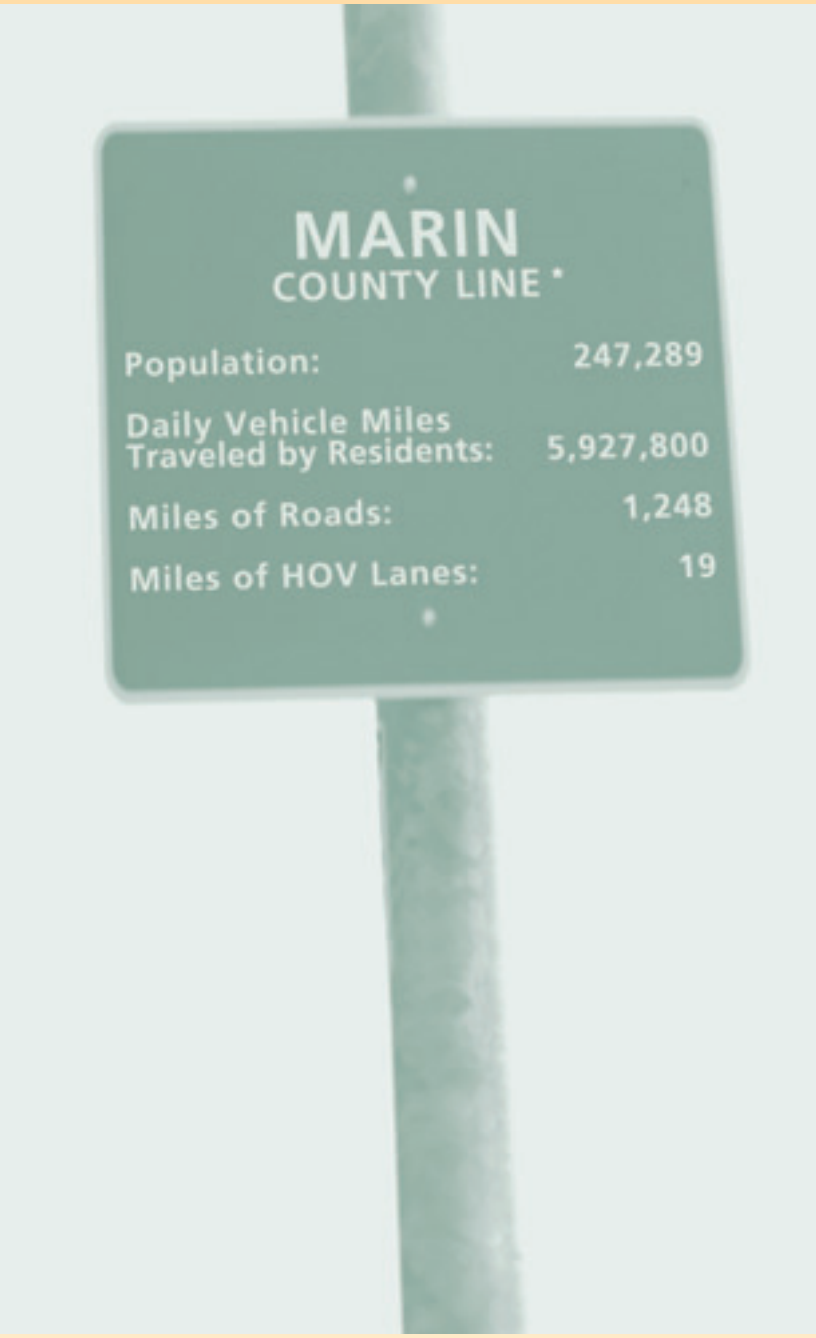
Easier

Compared to region	−	**Compared to region**	−
Compared to 2000/2001	+	**Compared to 2000/2001**	+

Compared to region	−
Compared to 2000/2001	−

Overall 2002 Score: -2 Overall 2001 Score: -3

MARIN COUNTY



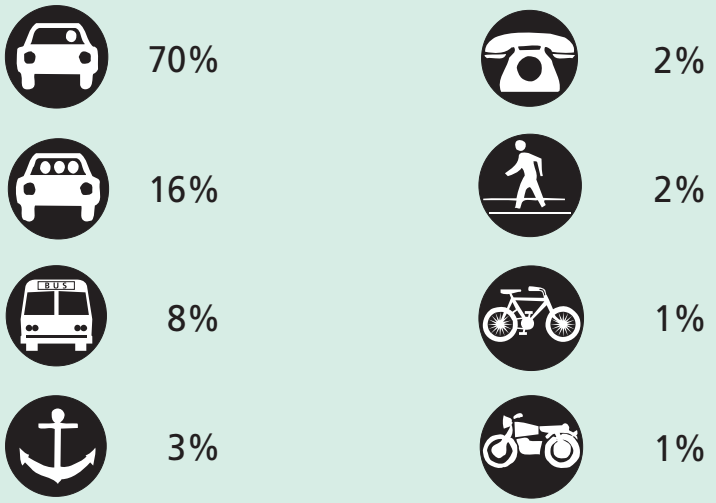
*See page 50 for footnotes.

Marin County

Seventy percent of residents in Marin drive alone to work, just two percent higher than the regional average (Figure 29). The rate of carpool use is slightly (1%) below the regional average. Compared with the other eight Bay Area counties, respondents with an origin of Marin County are the third most likely to use transit to get to work. Buses and ferries are popular, since those are the modes that the region offers. When asked why they find it difficult to carpool, Marin respondents cited difficulty finding carpool partners and irregular hours.

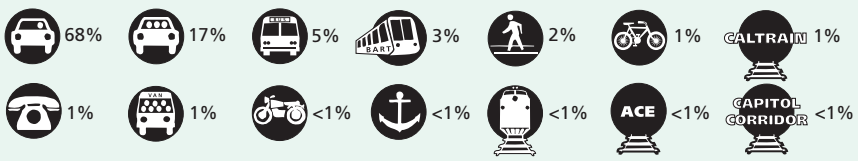
FIGURE 29

Primary Commute Mode



n=406

Regional Comparison



Commute mode patterns in Marin have stayed relatively consistent during the past year (Table 28). The one percent decrease in drive-alone commuters reverses the five year upward trend documented previously. A slight increase in carpool use is the highest seen in the course of collecting *Commute Profile* data.

The use of connecting modes increased by six percent for Marin residents in the past year (Table 29). Bicycling is particularly popular, since Golden Gate Transit buses and ferries allow bikes on board. Ferries have also become much more common as a connecting mode for Marin residents.

TABLE 28

Clustered Modes Over Time

	1994	1996	1999	2000	2001	2002
	67%	61%	64%	68%	71%	70%
	14%	15%	15%	12%	15%	16%
TRANSIT	10%	17%	16%	16%	10%	10%
OTHER	11%	7%	6%	6%	5%	4%

n=approximately 400 for each year

Marin County

TABLE 29

Top Five Connecting Modes

MARIN COUNTY

	3%
	3%
BUS	3%
	3%
	2%

TOTAL ALL 15%

n=67

REGION:

2%	2%	2%	2%	1%

TOTAL ALL 12%

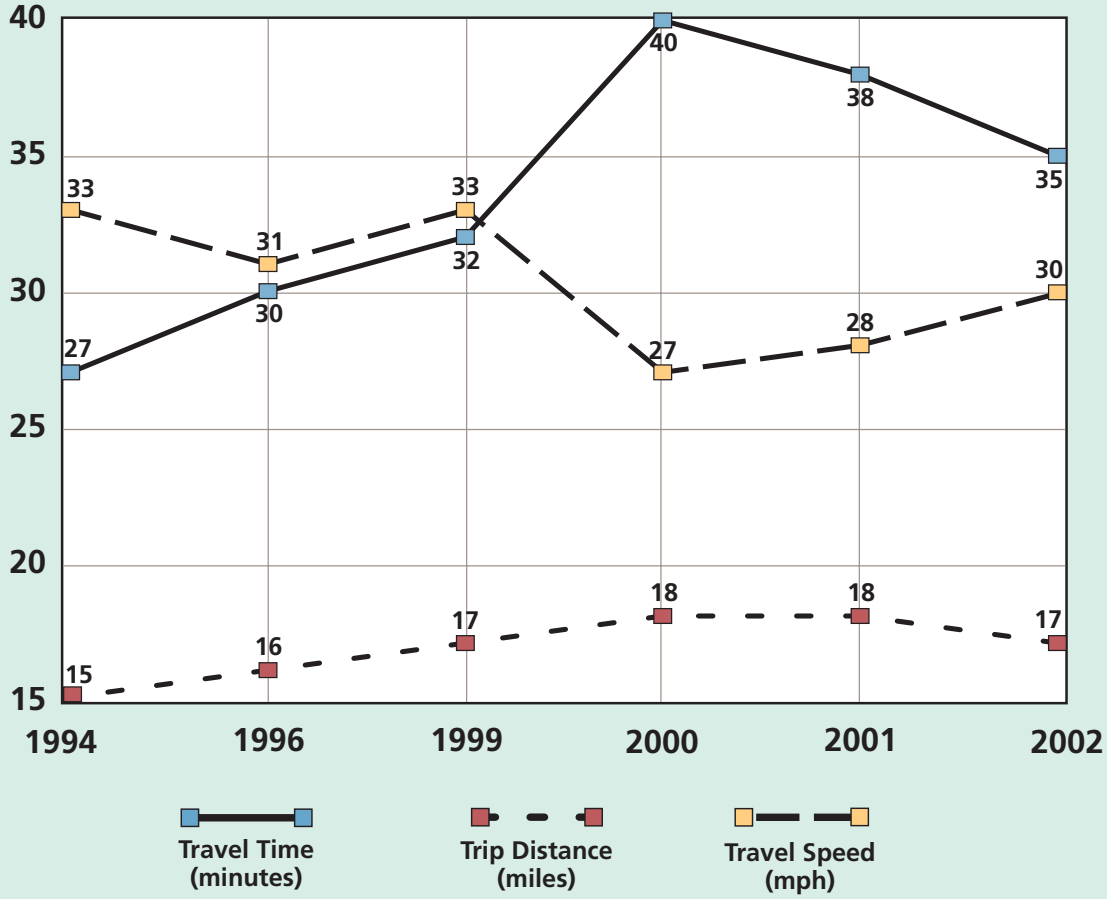
n=465

COMMUTE DISTANCE AND TIME

Marin commuters have experienced a decrease in both the distance and time of their daily commute (Figure 30). The result of this change is a slight increase in the average speed.

FIGURE 30

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

Perceptions of commute conditions in Marin County have improved slightly in the past year. More respondents feel their commute has gotten better, and that it is easier to use a commute alternative compared with those surveyed in 2001. The increase in

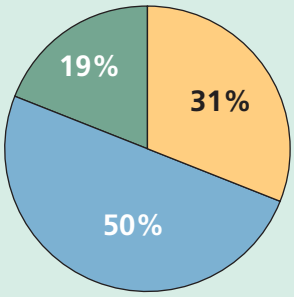
Marin County

percentage of commuters who said it is now easier to use carpools and bicycles is dramatic. The most common reason noted for an easier bike commute was a new bike lane. Carpoolers who said their commute was easier mentioned it was a result of new carpool lanes and more available carpool partners. On a regional level, Marin ranks fourth out of the nine counties in overall perceptions of commute conditions. Compared with the region as a whole, more Marin commuters feel their journey to work has gotten worse, and fewer feel it is possible to use a commute alternative.

FIGURE 31

Perceptions of Commute Conditions and Options

Has commute gotten better or worse?

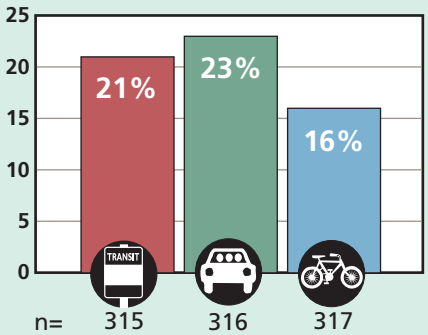


n=391

Worse Same Better

Compared to region −
Compared to 2000/2001 +

How possible would it be to use a commute alternative?

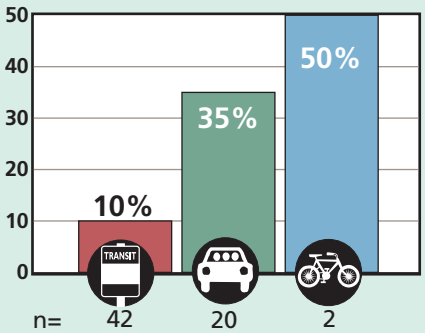


n= 315 316 317

Somewhat to Very Possible

Compared to region −
Compared to 2000/2001 =

Is it easier or more difficult to use a commute alternative compared with a year ago?



n= 42 20 2

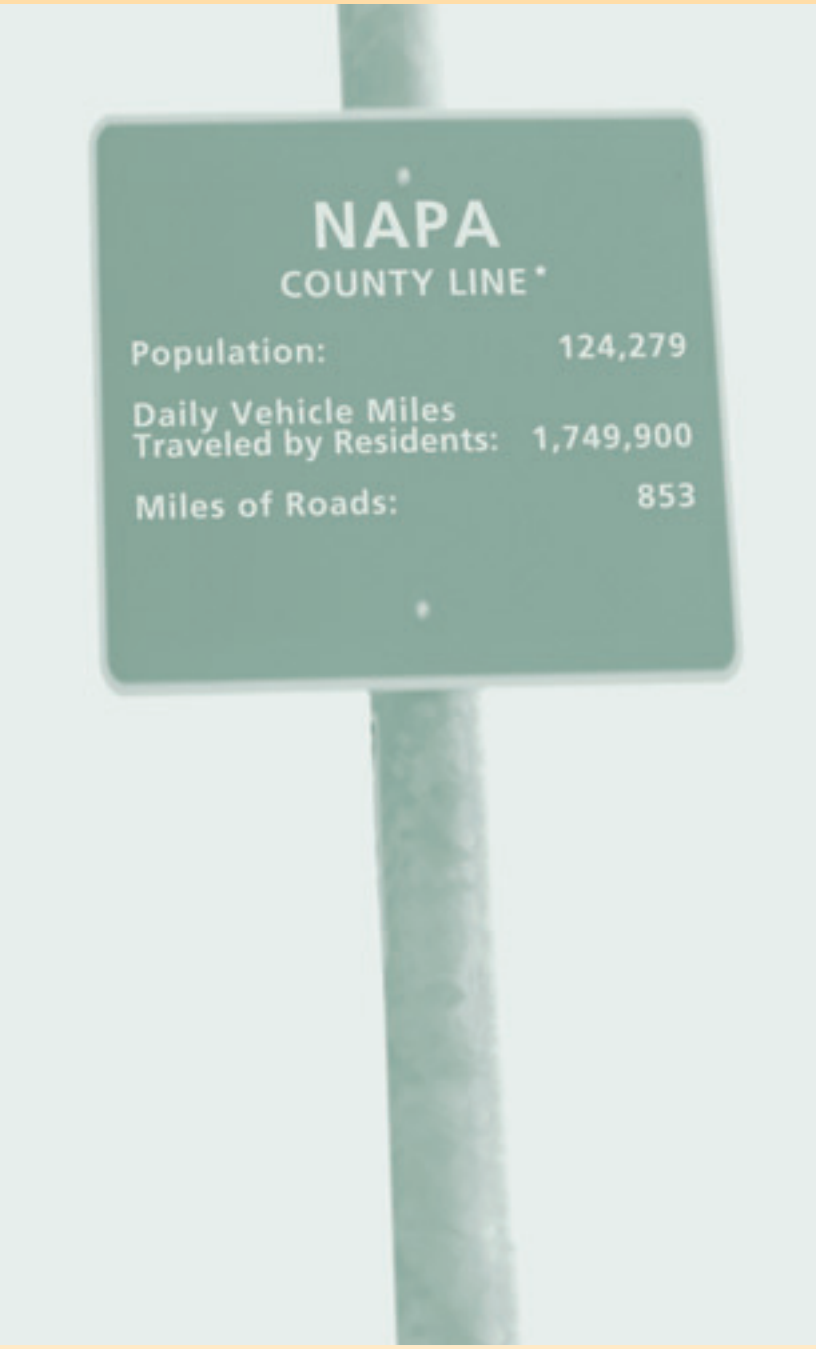
Easier

Compared to region +
Compared to 2000/2001 +

Overall 2002 Score: +1

Overall 2001 Score: -1

NAPA COUNTY



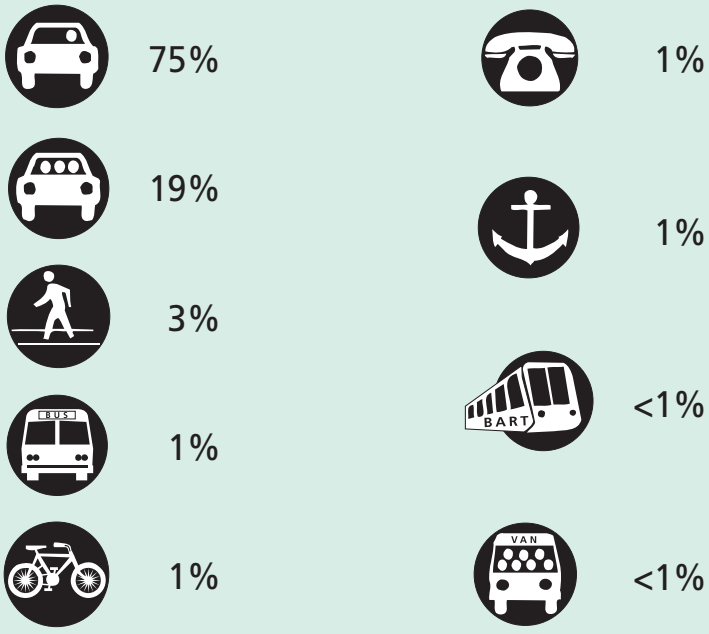
*See page 50 for footnotes.

Napa County

Napa has the third highest drive-alone rate, and the third highest carpool rate in the Bay Area (Figure 32). Only two percent of Napa's commuters use transit. Transit access is similar to other counties; approximately 70% of Napa's 125,000 residents are within a third of a mile of a bus line. Frequency of service may be more of an inhibiting factor. As a result, carpooling is the most convenient alternative mode of transportation available to Napa residents.

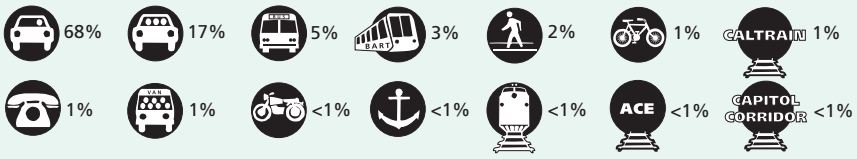
FIGURE 32

Primary Commute Mode



n=404

Regional Comparison



The percentage of drive-alone commuters, carpoolers and "other" mode commuters in Napa County has fluctuated by only one percent in the past year (Table 30). In 2000, the percentage of drive-alone commuters reached a high point, but since then has returned to levels similar to previous years. The percentage of transit riders has remained stable at two percent.

Napa residents said new and improved service had helped make taking transit to work easier.

A high drive-alone rate normally reflects itself in a low percentage of commuters using a connecting mode. This is the case in Napa County (Table 31). The most common connecting modes are carpooling, driving alone and bicycling.

TABLE 30

Clustered Modes Over Time

	1999	2000	2001	2002
	74%	79%	74%	75%
	20%	16%	20%	19%
	1%	1%	2%	2%
	5%	5%	4%	5%

n=approximately 400 for each year

Napa County

TABLE 31

Top Five Connecting Modes

NAPA COUNTY

	2%
	2%
	2%
	1%
BART	1%

TOTAL ALL 8%

n=38

REGION:					
	2%	2%	2%	2%	1%

TOTAL ALL 12%

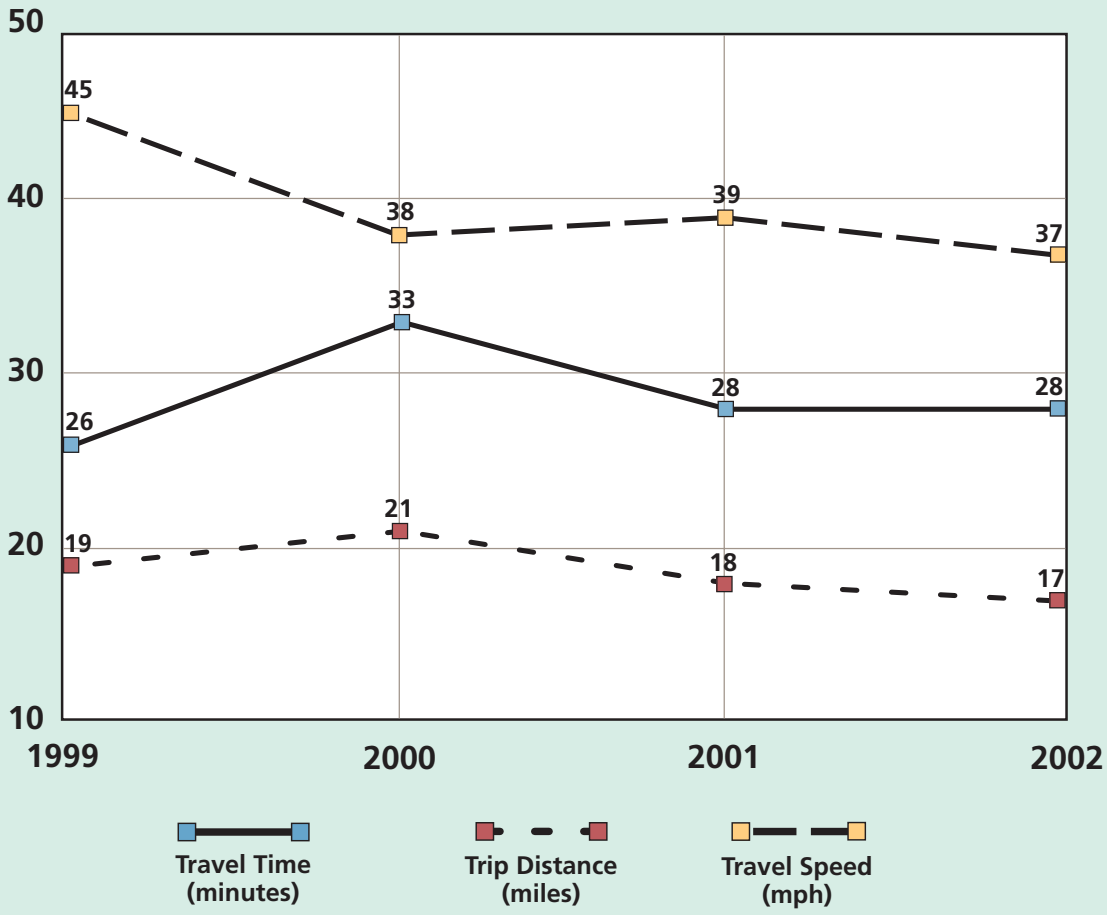
n=465

COMMUTE DISTANCE AND TIME

The average Napa commuter travels 17 miles in 28 minutes one way to work (Figure 33). This distance is only one mile more than the Bay Area average, and about two minutes faster. Despite an average travel speed that is higher than most other counties, average travel speed for respondents declined slightly between 2001 and 2002. Travel time remained constant between 2001 and 2002; the decline in travel speed is due to the reported one-way trip distance decreasing slightly (from 18 to 17 miles).

FIGURE 33

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

Napa County ranks seventh among the nine counties in the perception of commute conditions and options. Fewer commuters feel it would be possible to use a commute alternative than last year, and fewer feel it has become easier to use an alternative mode in the past year

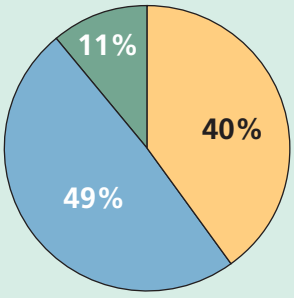
Napa County

(Figure 34). However, more people feel their commute has improved in the last year, most often because of lighter traffic or a new home or job location. Compared with the region, Napa commuters were less positive overall with their commute options. Common difficulties with transit include a lack of service and time. Barriers to carpooling are time and finding carpool partners.

FIGURE 34

Perceptions of Commute Conditions and Options

Has commute gotten better or worse?

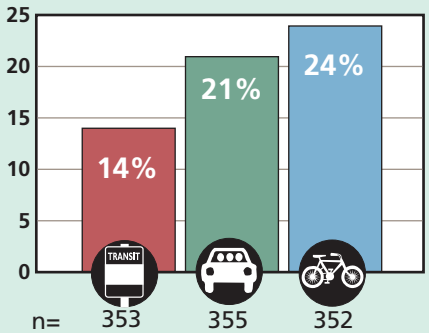


n=391

Worse Same Better

Compared to region −
Compared to 2000/2001 +

How possible would it be to use a commute alternative?

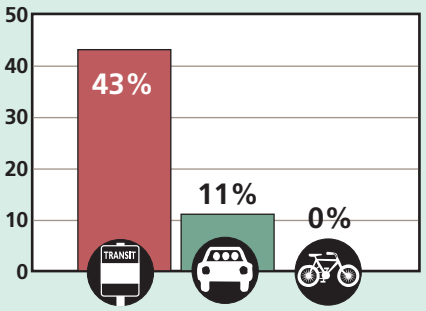


n= 353 355 352

Somewhat to Very Possible

Compared to region −
Compared to 2000/2001 −

Is it easier or more difficult to use a commute alternative compared with a year ago?



n= 7 18 3

Easier

Compared to region −
Compared to 2000/2001 −

Overall 2002 Score: -4

Overall 2001 Score: =

SAN FRANCISCO COUNTY

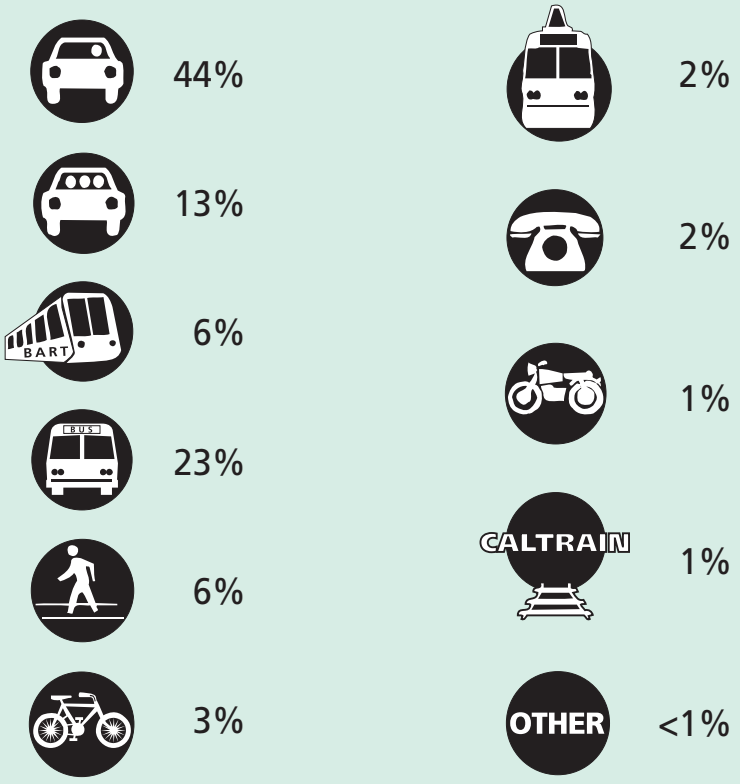
*See page 50 for footnotes.

San Francisco County

The unique combination of extensive transit service, limited parking (only 48% of commuters who live in San Francisco have free parking, compared to 78% region-wide) and high density in San Francisco promotes the use of travel modes that do not rely on cars. For this reason, both the drive-alone and carpool rates in San Francisco have historically been the lowest in the Bay Area region (Figure 35). San Francisco can also claim the highest percentage of bicycle commuters and residents who walk to work.

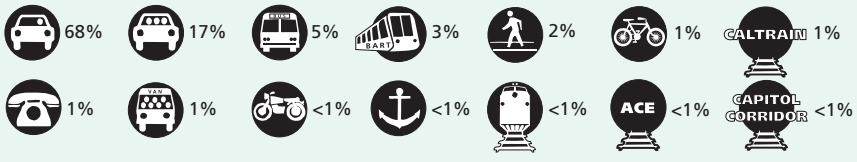
FIGURE 35

Primary Commute Mode



n=401

Regional Comparison



Since 1993, the distribution of commute mode choice has fluctuated each year. However, over the past year the clustered mode data has remained stable (Table 32). In 1996, the percentage of residents who traveled to work on transit was 41%. It has continued on a downward trend over the past six years, but stabilized in the most recent year. Residents who said it was difficult to use transit to get to work most often mentioned time and a lack of service on their commute route as the reasons.

Not surprisingly, the use of connecting modes for San Francisco residents is very common (Table 33). With a low drive-alone rate, the need for commuters to utilize a connecting mode increases. The bus is the most common connecting mode used by residents of San Francisco.

TABLE 32

Clustered Modes Over Time

	1993	1994	1996	1999	2000	2001	2002
	41%	46%	37%	40%	45%	44%	45%
	11%	9%	9%	12%	8%	13%	13%
TRANSIT	35%	35%	41%	37%	36%	31%	32%
OTHER	14%	10%	13%	10%	11%	12%	10%

n=approximately 400 for each year

San Francisco County

TABLE 33

Top Five Connecting Modes

SAN FRANCISCO COUNTY

BUS	8%
BART	5%
	4%
	3%
	3%

TOTAL ALL 22%

n=103

REGION:

2%	2%	2%	2%	1%

TOTAL ALL 12%

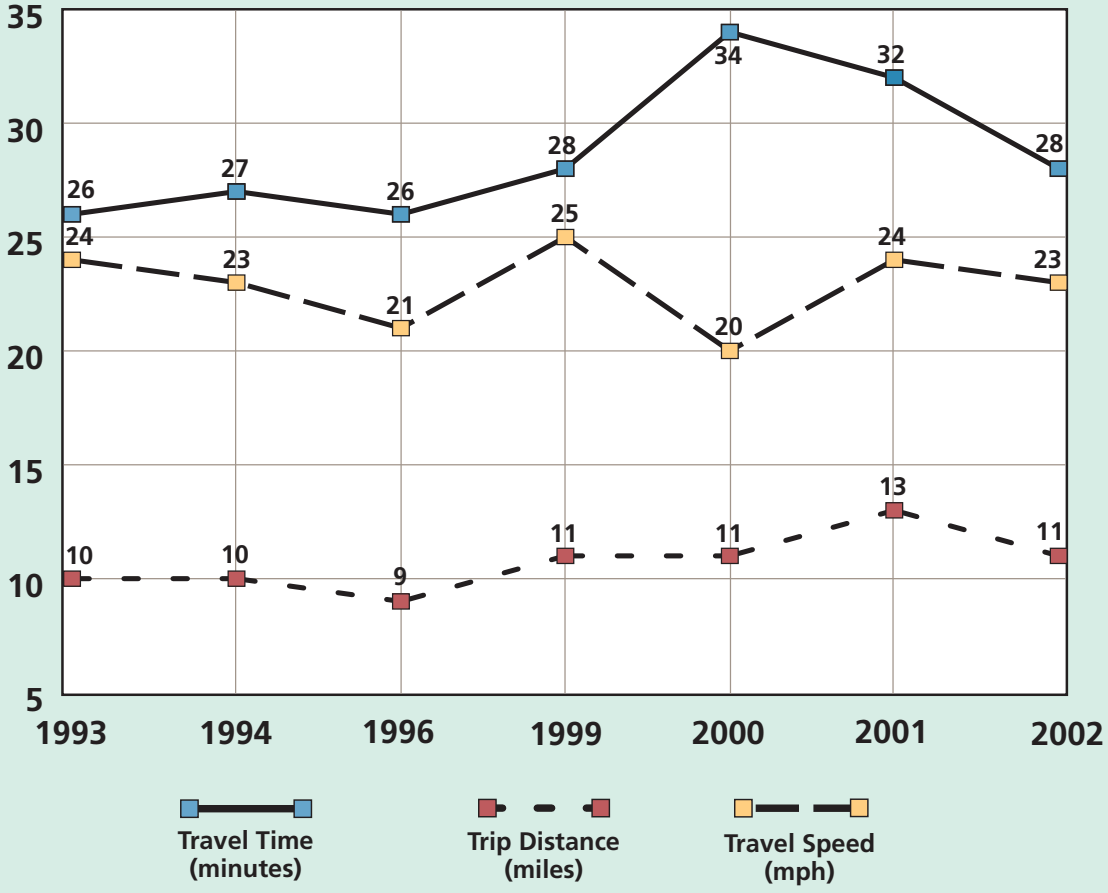
n=465

COMMUTE DISTANCE AND TIME

The average San Francisco resident travels 11 miles to work in 28 minutes (Figure 36). Both numbers have declined a bit in the past year, keeping the average speed relatively consistent (dropping slightly from 24 to 23 miles per hour). Compared to the nine-county region, the average speed in San Francisco is nine miles per hour less. This is a result of high levels of density and congestion, combined with the high use of generally slower, alternative commute modes.

FIGURE 36

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

The overall perception of commute conditions and options in San Francisco is better than the region as a whole (Figure 36). San Francisco ranked third this year among all nine counties, after Alameda and Sonoma. A higher percentage of residents felt their commute had

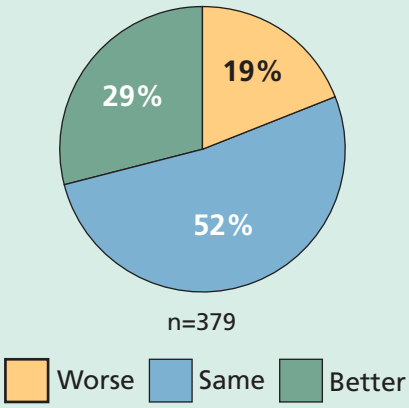
San Francisco County

improved, and more felt it would be at least somewhat possible to use a commute alternative to get to work. Attitudes within the county have stayed the same since last year in each of the three categories. Almost 50% of those who felt their commute had improved said it was because traffic had gotten lighter. Sixty-seven percent of the bicycle commuters surveyed in San Francisco said it was easier to commute by bike than it was a year ago. Of those, 50% said it was because of a new bike lane that was installed.

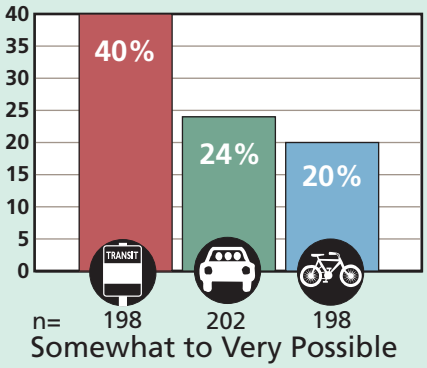
FIGURE 37

Perceptions of Commute Conditions and Options

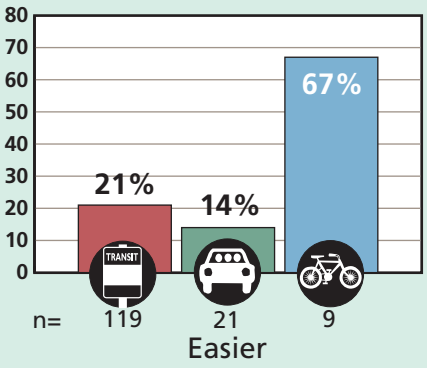
Has commute gotten better or worse?



How possible would it be to use a commute alternative?



Is it easier or more difficult to use a commute alternative compared with a year ago?

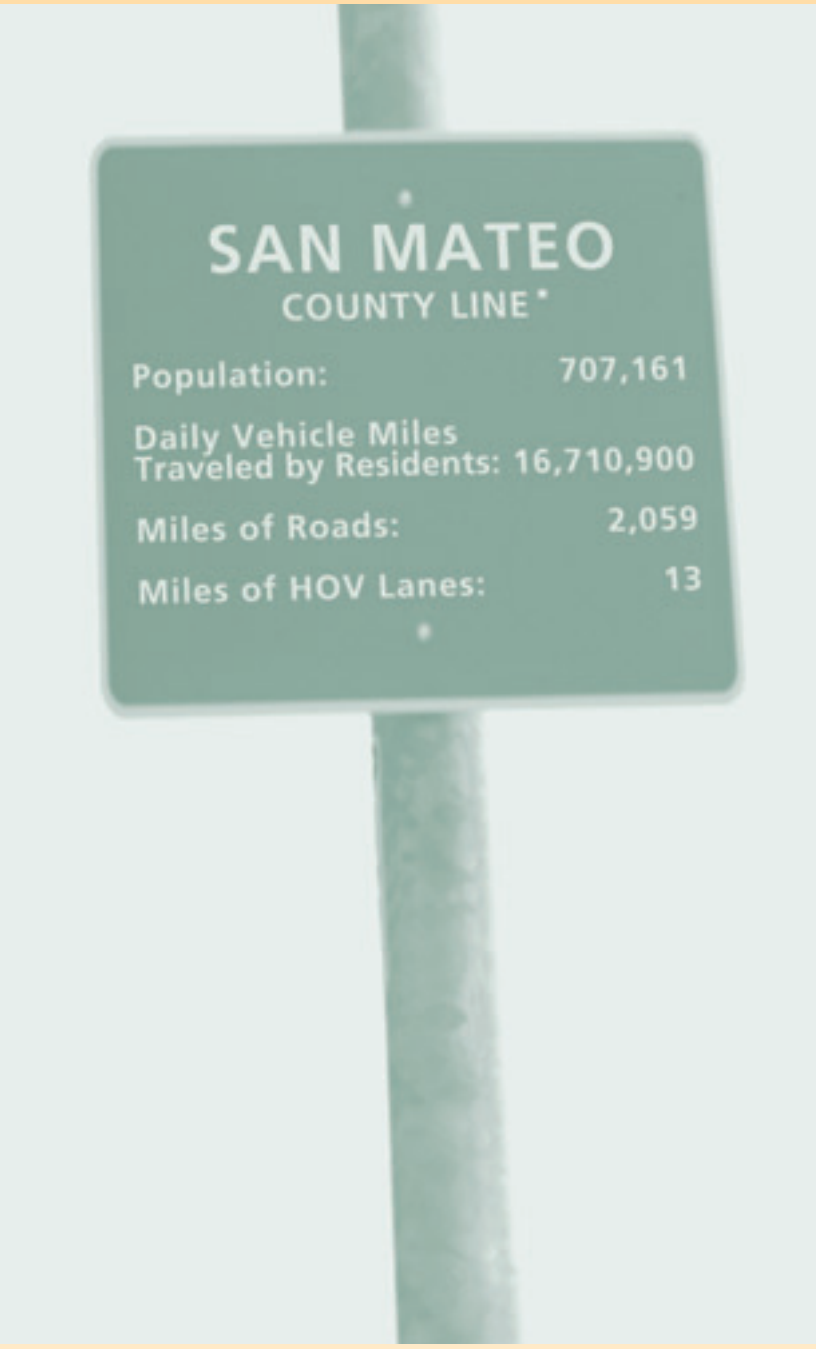


Compared to region	**Compared to region**	**Compared to region**
Compared to 2000/2001	**Compared to 2000/2001**	**Compared to 2000/2001**

Overall 2002 Score: +2

Overall 2001 Score: +4

SAN MATEO COUNTY



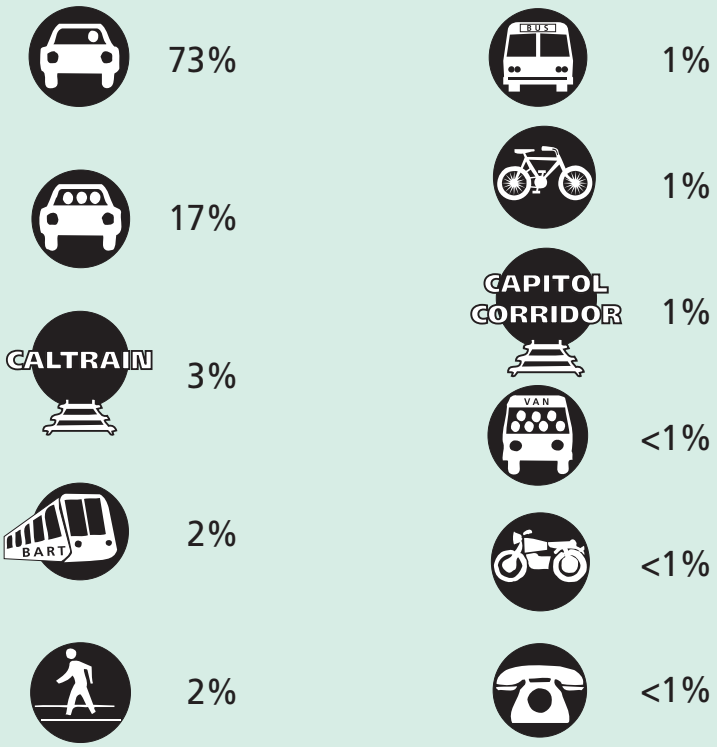
*See page 50 for footnotes.

San Mateo County

The percentage of commuters who drive alone to work in San Mateo County is five percentage points higher than the regional average (Figure 38). The carpool and transit rates are also below the regional average. This is slightly surprising given the range of transit options available to residents in San Mateo, including BART, SamTrans and Caltrain. When asked why it was difficult to take transit to work, respondents commonly answered that it took too much time, or there was no service for their commute. Reasons for not carpooling included difficulties finding carpool partners or working irregular hours.

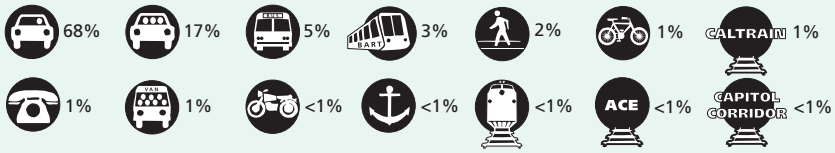
FIGURE 38

Primary Commute Mode



n=402

Regional Comparison



The drive-alone rate in San Mateo County has remained relatively stable since 1999 (Table 34). There has been a slight decrease in the past year, coupled with a three percentage point increase in carpool use and a two percentage point decrease in transit use.

San Mateo commuters use a connecting mode 12% of the time (Table 35); this is equal to the regional average. The high drive-alone rate and low transit use explains the similar percentage of commuters using a connecting mode within the county.

TABLE 34

Clustered Modes Over Time

	1993	1994	1996	1999	2000	2001	2002
	70%	72%	66%	75%	73%	75%	74%
	17%	17%	18%	12%	13%	14%	17%
	8%	7%	9%	9%	11%	9%	7%
	5%	4%	6%	4%	4%	2%	3%

n=approximately 400 for each year

San Mateo County

TABLE 35

Top Five Connecting Modes

SAN MATEO COUNTY

BUS	3%
CALTRAIN	3%
	2%
	2%
BART	2%

TOTAL ALL 12%

n=55

REGION:					
	2%	2%	2%	2%	1%

TOTAL ALL 12%

n=465

COMMUTE DISTANCE AND TIME

In the past year, there has been a striking five minute decrease in commute time of San Mateo residents (Figure 39). The distance has decreased one mile, resulting in an increase of speed of four miles per hour. The notable downturn in the region's economy in the past year is likely to have had a positive impact on traffic congestion and, therefore, commute time and speed.

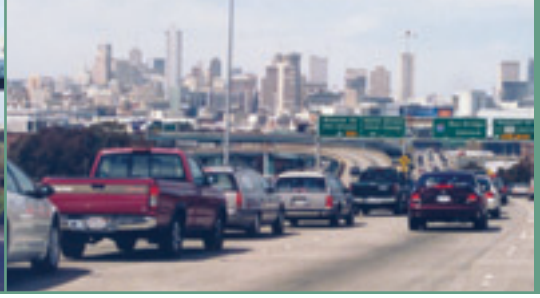
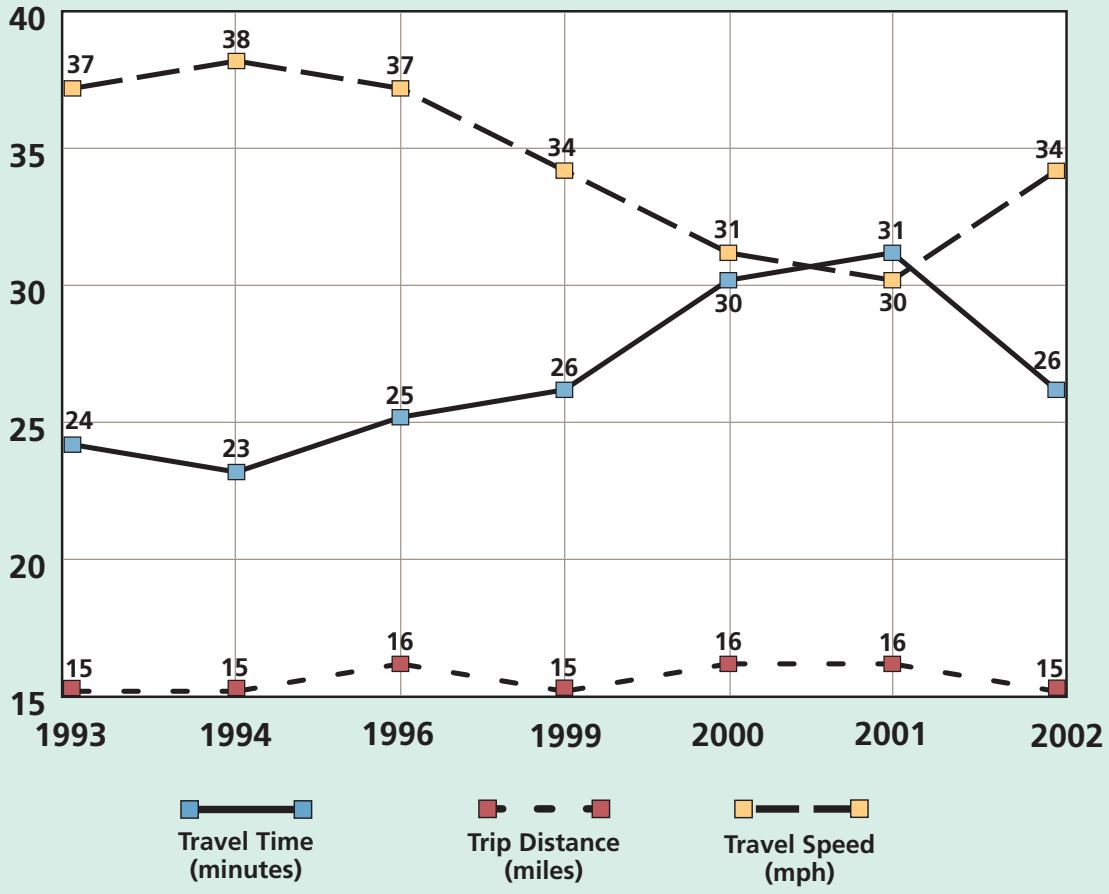


FIGURE 39

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

San Mateo County ranks fifth out of all nine counties in residents' perceptions of commute conditions and options (Figure 40). A higher percentage of San Mateo County residents feel that commute conditions have improved compared with respondents from the region as a whole.

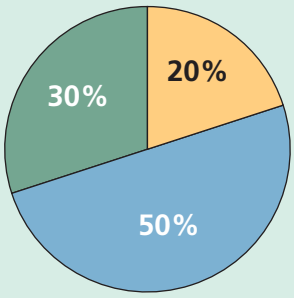
San Mateo County

The most common reason noted for the improvement was less traffic congestion. Few people feel it is possible for them to use a commute alternative for reasons such as time, difficulty finding a carpool partner or a lack of transit along the route.

FIGURE 40

Perceptions of Commute Conditions and Options

Has commute gotten better or worse?

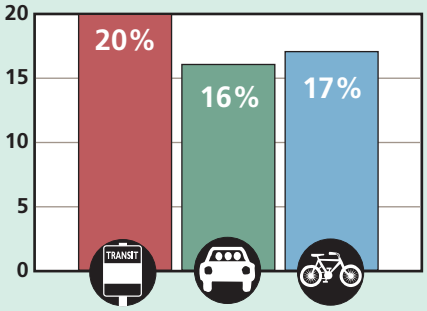


n=389

Worse Same Better

Compared to region +
Compared to 2000/2001 +

How possible would it be to use a commute alternative?

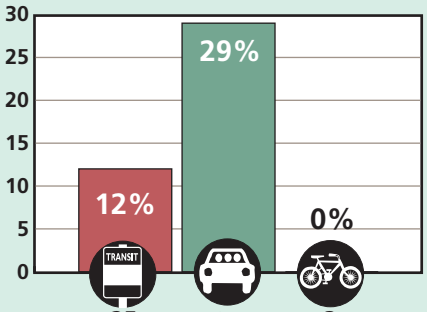


n= 333 334 333

Somewhat to Very Possible

Compared to region −
Compared to 2000/2001 −

Is it easier or more difficult to use a commute alternative compared with a year ago?



n= 25 21 3

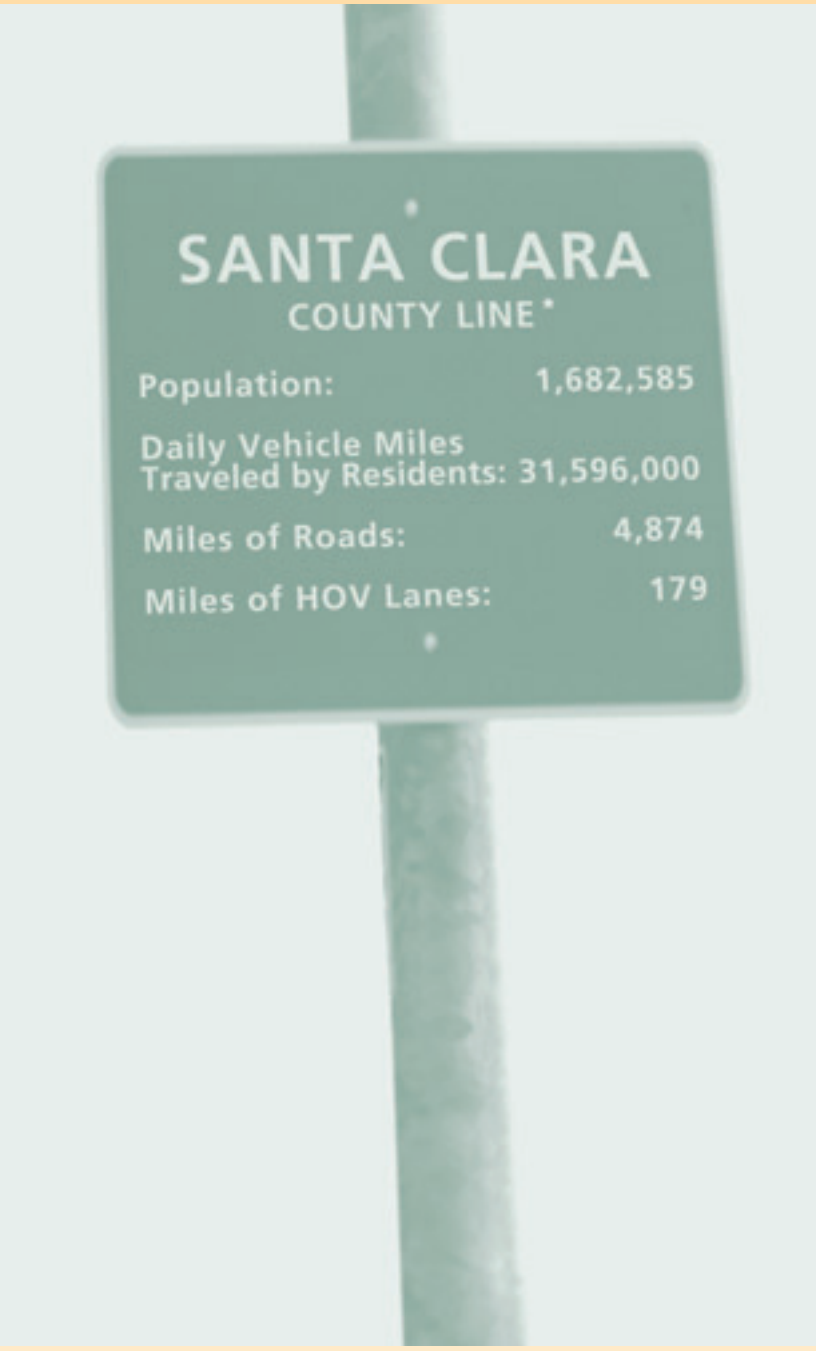
Easier

Compared to region −
Compared to 2000/2001 =

Overall 2002 Score: -1

Overall 2001 Score: -3

SANTA CLARA COUNTY



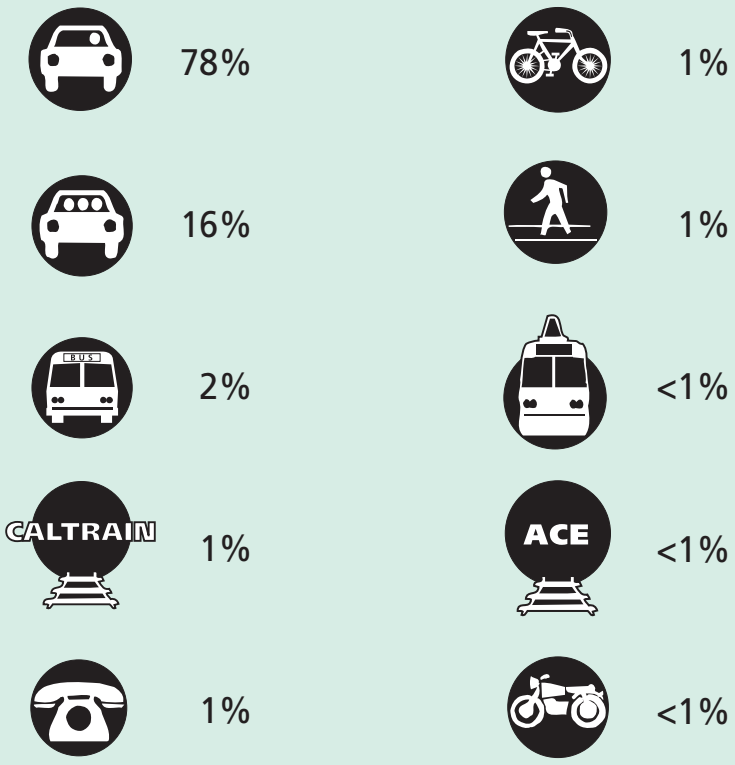
*See page 50 for footnotes.

Santa Clara County

Santa Clara has the highest drive-alone rate in the Bay Area (Figure 41). Not surprisingly, the percentage of residents who carpool and take transit to work are among the lowest. While the county does have a few transit options, dispersed employment centers make it difficult to provide attractive service for many commuters. Suburban office parks frequently offer free parking to employees, reducing a common barrier to driving to work. Eighty-nine percent of Santa Clara residents have free all-day parking at work, compared with only 78% in the entire Bay Area region.

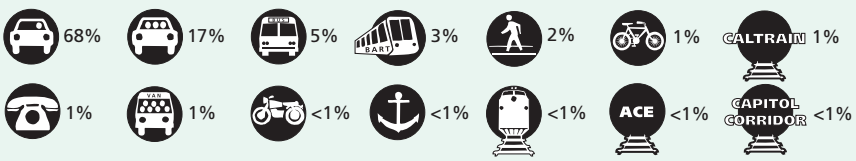
FIGURE 41

Primary Commute Mode



n=406

Regional Comparison



The distribution of commute modes has remained relatively stable since 1998 (Table 36). Over the past two years, the percentage of drive-alone commuters shows a moderate increase.

Few commuters in Santa Clara County use a connecting mode in their daily commute—approximately half the regional average (Table 37). The high drive-alone rate and ample parking means there is very little demand for combining two or more modes.

TABLE 36

Clustered Modes Over Time

	1993	1994	1995	1996	1998	1999	2000	2001	2002
	78%	71%	71%	74%	77%	77%	77%	78%	79%
	15%	17%	21%	18%	18%	15%	15%	17%	16%
TRANSIT	4%	7%	4%	3%	3%	5%	4%	3%	3%
OTHER	3%	5%	4%	5%	1%	2%	4%	3%	2%

n=approximately 400 for each year

Santa Clara County

TABLE 37

Top Five Connecting Modes

SANTA CLARA COUNTY

2%

1%

1%

1%

1%

TOTAL ALL 6%

n=30

REGION:

2%

2%

2%

2%

1%

TOTAL ALL 12%

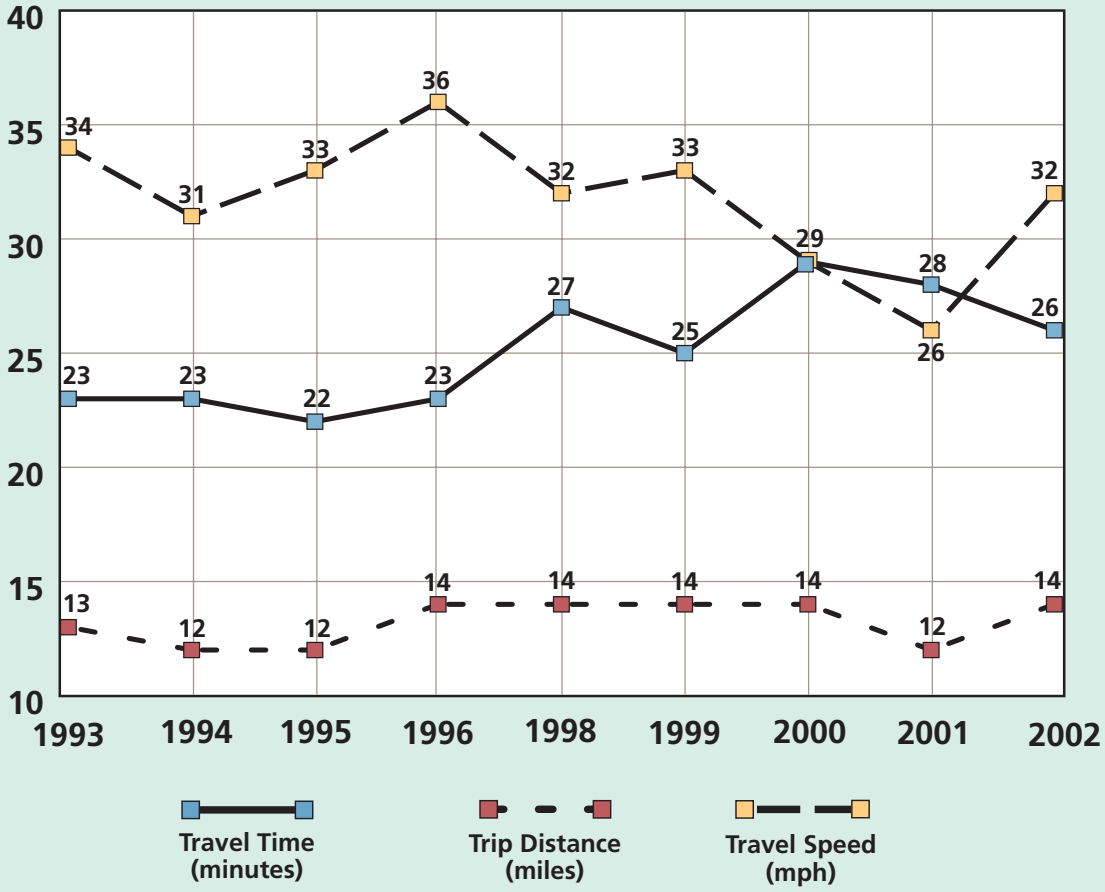
n=465

COMMUTE DISTANCE AND TIME

Santa Clara commuters have a below average commute time and distance compared to all Bay Area residents (Figure 42). They have the shortest commute in minutes, and only San Francisco residents travel a shorter average distance. The average commute speed of Santa Clara residents has increased by six miles per hour in the past year. This is most likely a reflection of decreasing traffic congestion in the region.

FIGURE 42

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

Santa Clara County residents feel better about the commute options available to them than residents of most other counties in the region (Figure 43). Only Alameda County residents feel more positively overall about their commute situation. Santa Clara scored higher in all

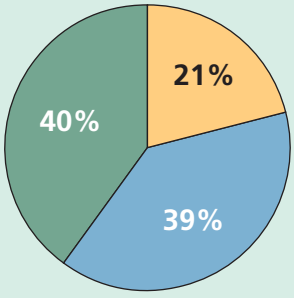
Santa Clara County

three categories than the regional average. Forty percent of residents felt their commute had improved in the past year. Almost 70% of that group said their commute had gotten better because of lighter traffic. Fewer commuters feel using a commute alternative is more possible now than a year ago. A lower percentage also feel using a commute alternative has become easier in the past year. Common reasons for being unable to use transit include time and a lack of service. Barriers to carpooling in the county are most often irregular hours and difficulty finding carpool partners.

FIGURE 43

Perceptions of Commute Conditions and Options

Has commute gotten better or worse?

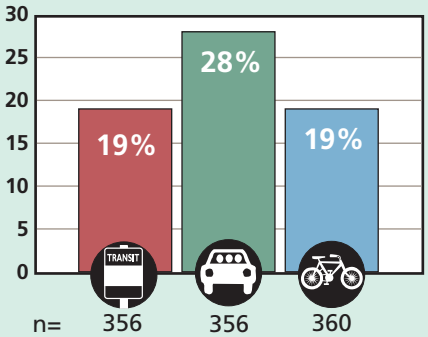


n=391

Worse Same Better

Compared to region +
Compared to 2000/2001 +

How possible would it be to use a commute alternative?

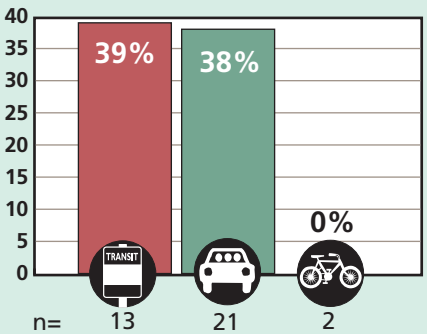


n= 356 356 360

Somewhat to Very Possible

Compared to region +
Compared to 2000/2001 −

Is it easier or more difficult to use a commute alternative compared with a year ago?



n= 13 21 2

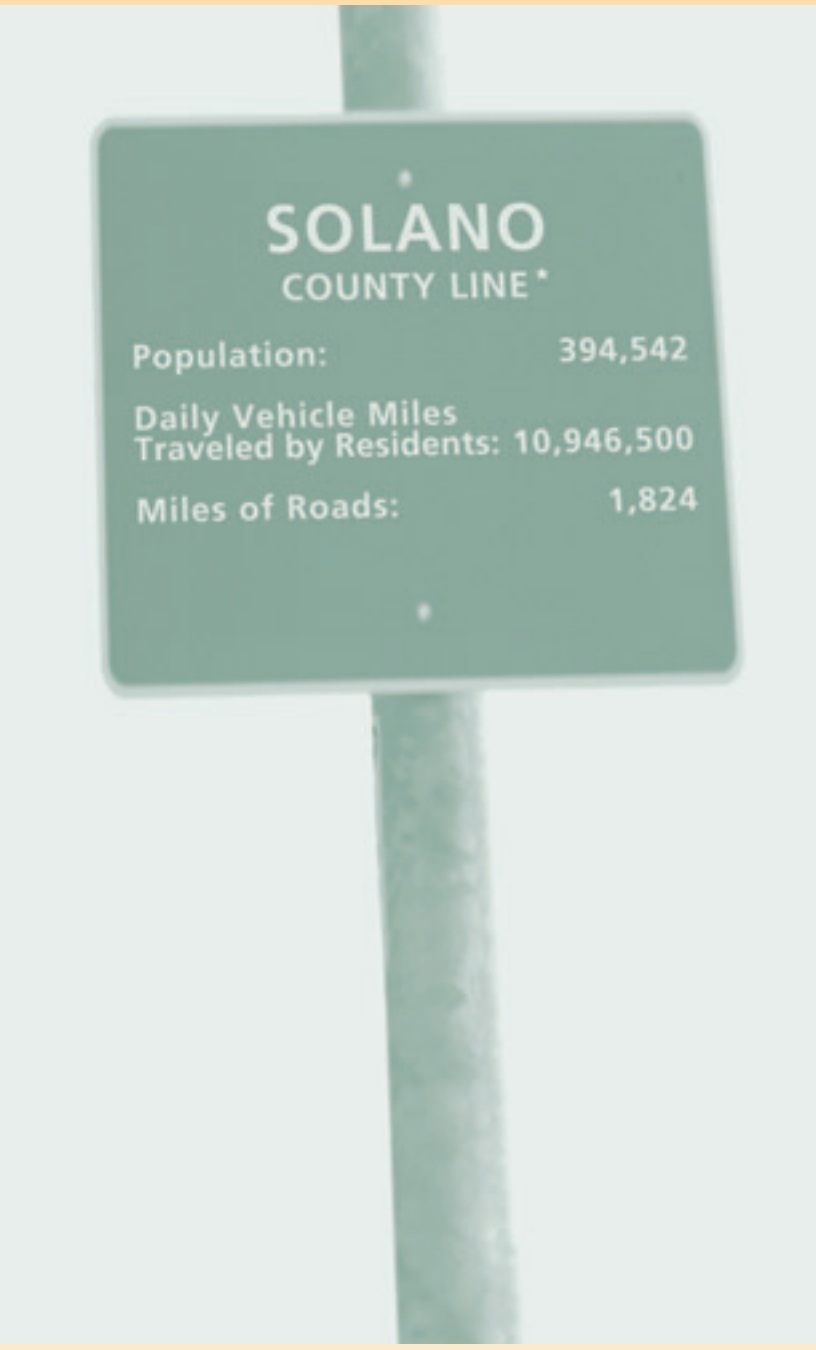
Easier

Compared to region +
Compared to 2000/2001 −

Overall 2002 Score: +2

Overall 2001 Score: +5

SOLANO COUNTY



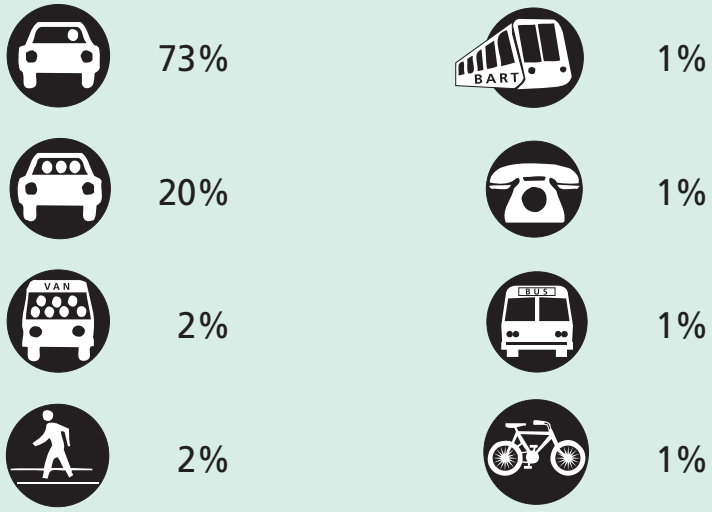
*See page 50 for footnotes.

Solano County

Solano County has the highest vanpooling rate and the second highest carpool rate (after Contra Costa) in the region (Figure 44). The average Solano County respondent commutes 25 miles one-way to work, nine miles more than the regional average. Carpooling and vanpooling are particularly efficient for long-distance commuting, so it is logical that they would be popular in Solano County. The drive-alone rate is still above average for the region due to low use of transit.

FIGURE 44

Primary Commute Mode



n=403

Regional Comparison

The drive-alone rate in Solano County fluctuated considerably between 1993 and 1999 (Table 38). Since 2000, the percentage of drive-alone commuters has remained between 72% and 73%. The rate of transit use was at a high of seven percent in 2000, but in the past two years has dipped and remained at two percent.

Eight percent of commuters in Solano County use a connecting mode in their daily travel (Table 39). While this is below the regional average, it is not as low as some of the other counties with a high drive-alone rate. Since there are so many Solano residents who carpool and vanpool, a connecting mode is often necessary to start or complete their journey to work.

TABLE 38

Clustered Modes Over Time

	1993	1994	1995	1996	1998	1999	2000	2001	2002
	68%	72%	73%	67%	77%	66%	72%	73%	73%
	25%	22%	22%	23%	18%	25%	19%	24%	22%
TRANSIT	4%	3%	3%	5%	4%	4%	7%	2%	2%
OTHER	3%	3%	3%	6%	2%	4%	3%	1%	3%

n=approximately 400 for each year

Solano County

TABLE 39

Top Five Connecting Modes

SOLANO COUNTY

	2%
	2%
BART	2%
BUS	1%
VAN	1%

TOTAL ALL 8%

n=34

REGION:

2%	2%	2%	2%	1%

TOTAL ALL 12%

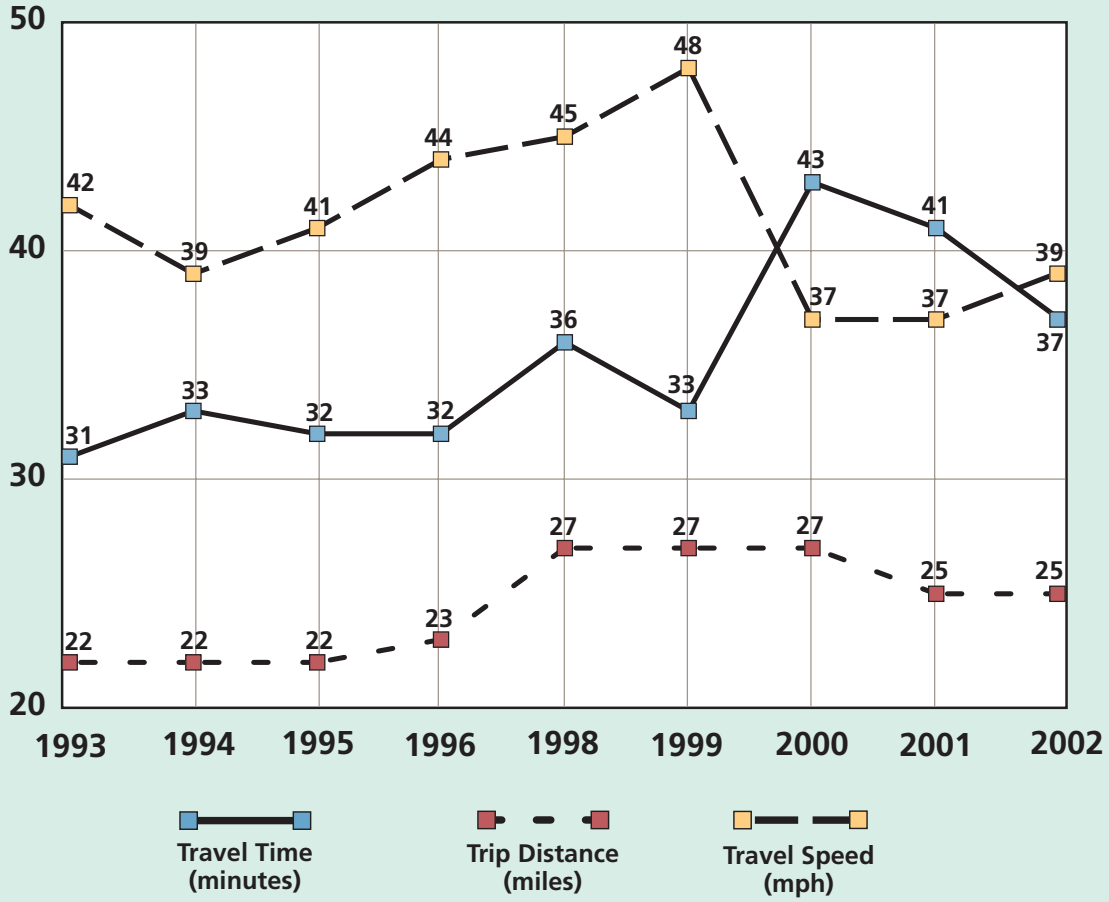
n=465

COMMUTE DISTANCE AND TIME

Commuters living in Solano County travel the farthest and at the highest speed of any county in the Bay Area (Figure 45). They also have the longest commute time in the region. Despite relatively long-distance commutes, the past two years have seen a trend of relatively shorter distances and commute times, resulting in a higher average travel speed in 2002.

FIGURE 45

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

The perceptions of commute conditions in Solano County are, in general, less positive than they were a year ago, and less positive than other counties in the region (Figure 46). More people felt their commute had gotten worse in the past year compared to the region as a whole

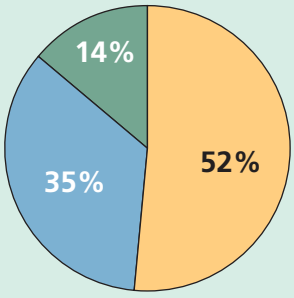
Solano County

and compared with last year. When asked why their commute has gotten worse, 73% of commuters said it was due to increasing traffic. When asked about barriers to carpooling, Solano residents frequently mentioned difficulty finding carpool partners and working irregular hours. Common reasons for not using transit included taking too much time and not having adequate service along the route to work. Almost 50% of those who could not easily bike to work said distance was the most prohibitive barrier. This is not surprising in a county with an average commute of 25 miles one-way.

FIGURE 46

Perceptions of Commute Conditions and Options

Has commute gotten better or worse?

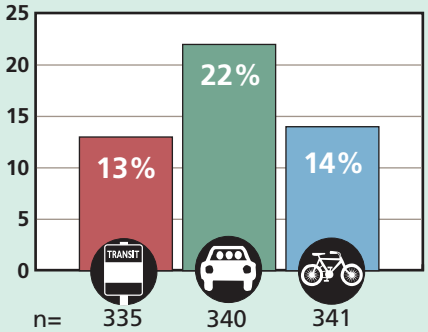


n=390

Worse Same Better

Compared to region −
Compared to 2000/2001 −

How possible would it be to use a commute alternative?

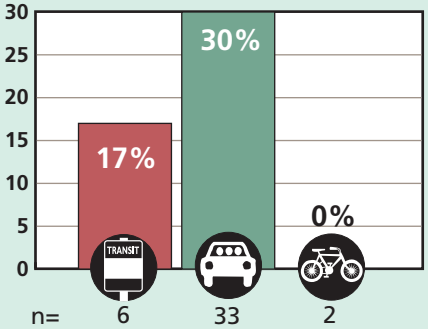


n= 335 340 341

Somewhat to Very Possible

Compared to region −
Compared to 2000/2001 −

Is it easier or more difficult to use a commute alternative compared with a year ago?



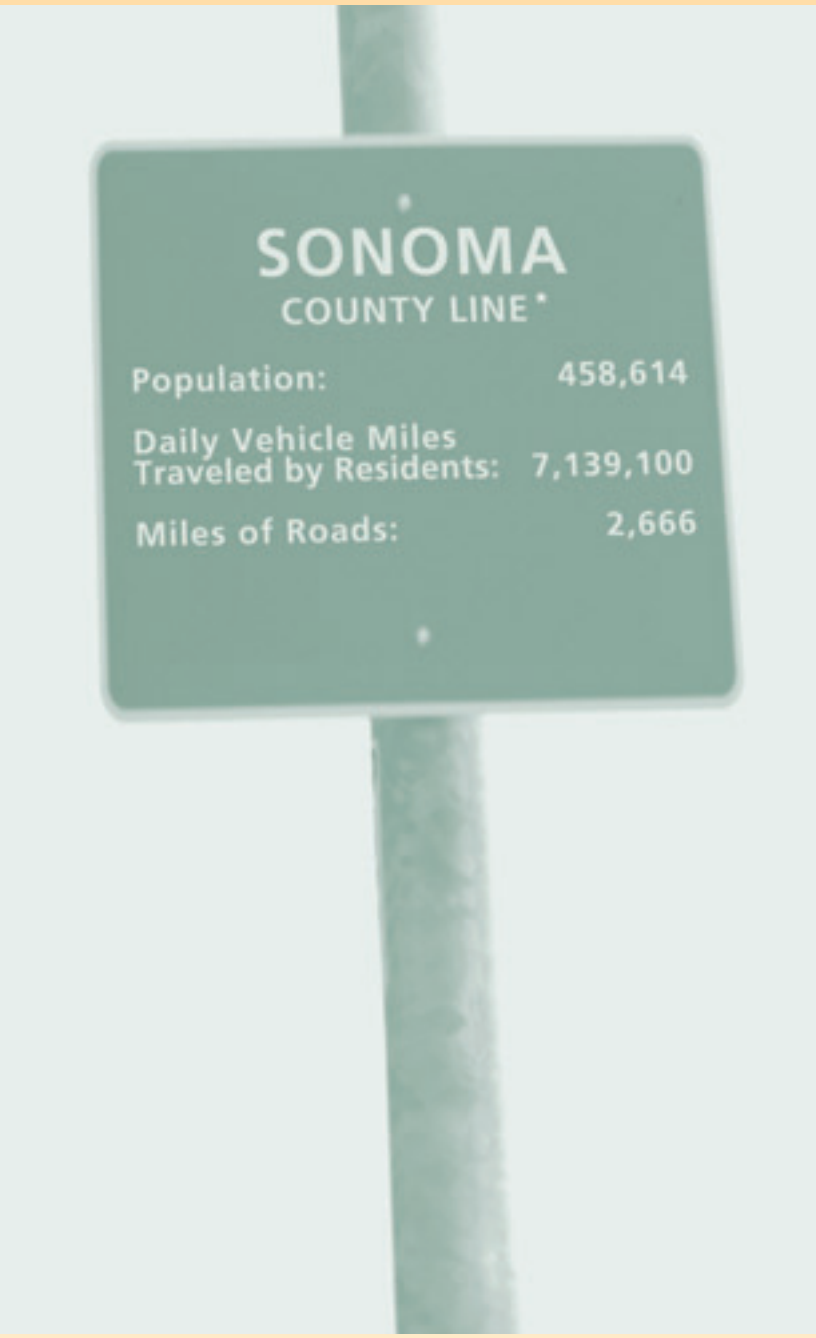
n= 6 33 2

Easier

Compared to region −
Compared to 2000/2001 +

Overall 2002 Score: -4 Overall 2001 Score: -2

SONOMA COUNTY



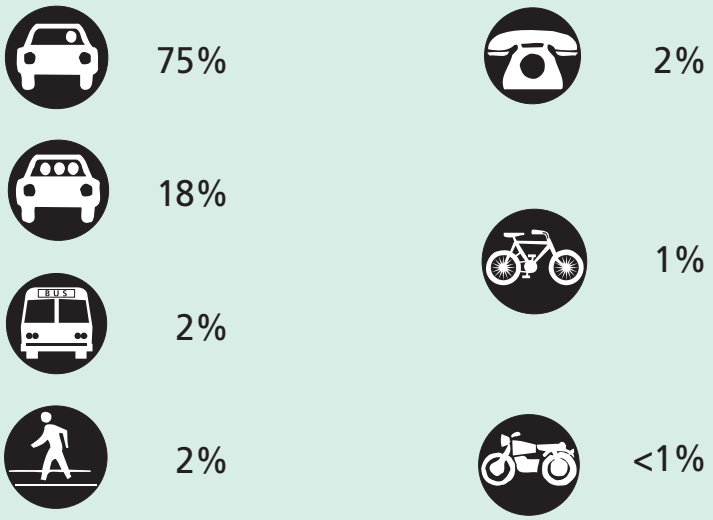
*See page 50 for footnotes.

Sonoma County

Seventy-five percent of commuters in Sonoma County drive alone to work (Figure 47). Santa Clara is the only county in the Bay Area where residents are more likely to drive alone to work. The carpool rate in the county is average for the region. Commuters who are unable to carpool to work cite reasons such as having difficulty finding carpool partners and working irregular hours. Two percent of Sonoma commuters take transit to work, the second lowest rate in the nine Bay Area counties. The lower-density county is not conducive to frequent transit service.

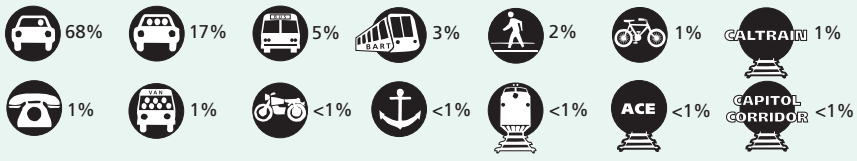
FIGURE 47

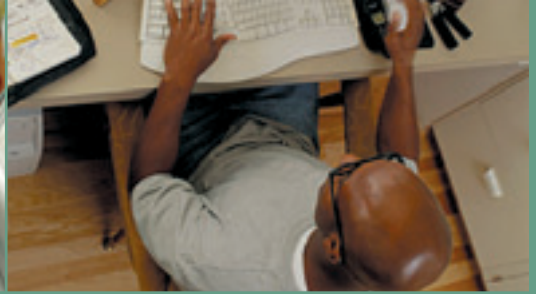
Primary Commute Mode



n=406

Regional Comparison





The use of "other" modes in Sonoma County moved back up to the level it was at in 1999 (Table 40). The percentage of Sonoma residents using transit continued a slow decline. The drive-alone rate peaked at 77% in 2000 and 2001, and has leveled off in the past year to approximately 76%.

Only seven percent of Sonoma commuters use a connecting mode (Table 41). A high drive-alone rate makes the use of a connecting mode less common.

TABLE 40

Clustered Modes Over Time

	1999	2000	2001	2002
	74%	77%	77%	76%
	17%	17%	19%	18%
TRANSIT	4%	3%	3%	2%
OTHER	5%	4%	2%	5%

n=approximately 400 for each year

Sonoma County

TABLE 41

Top Five Connecting Modes

SONOMA COUNTY

	3%
	2%
	1%
	1%
BART	<1%

TOTAL ALL 7%

n=29

REGION:				
2%	2%	2%	2%	1%

TOTAL ALL 12%

n=465

COMMUTE DISTANCE AND TIME

Sonoma residents travel an average of 19 miles to work in 31 minutes and at a speed of 36 miles per hour (Figure 48). This is slightly longer, further and faster than the regional average. In the past year, both the time and distance have decreased resulting in a slightly higher average speed.

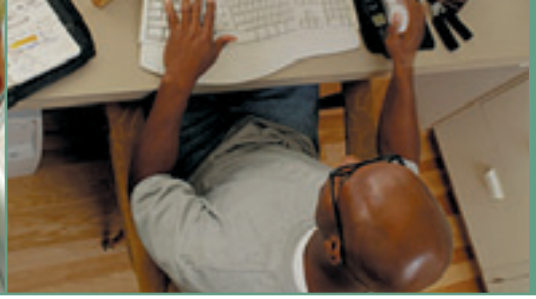
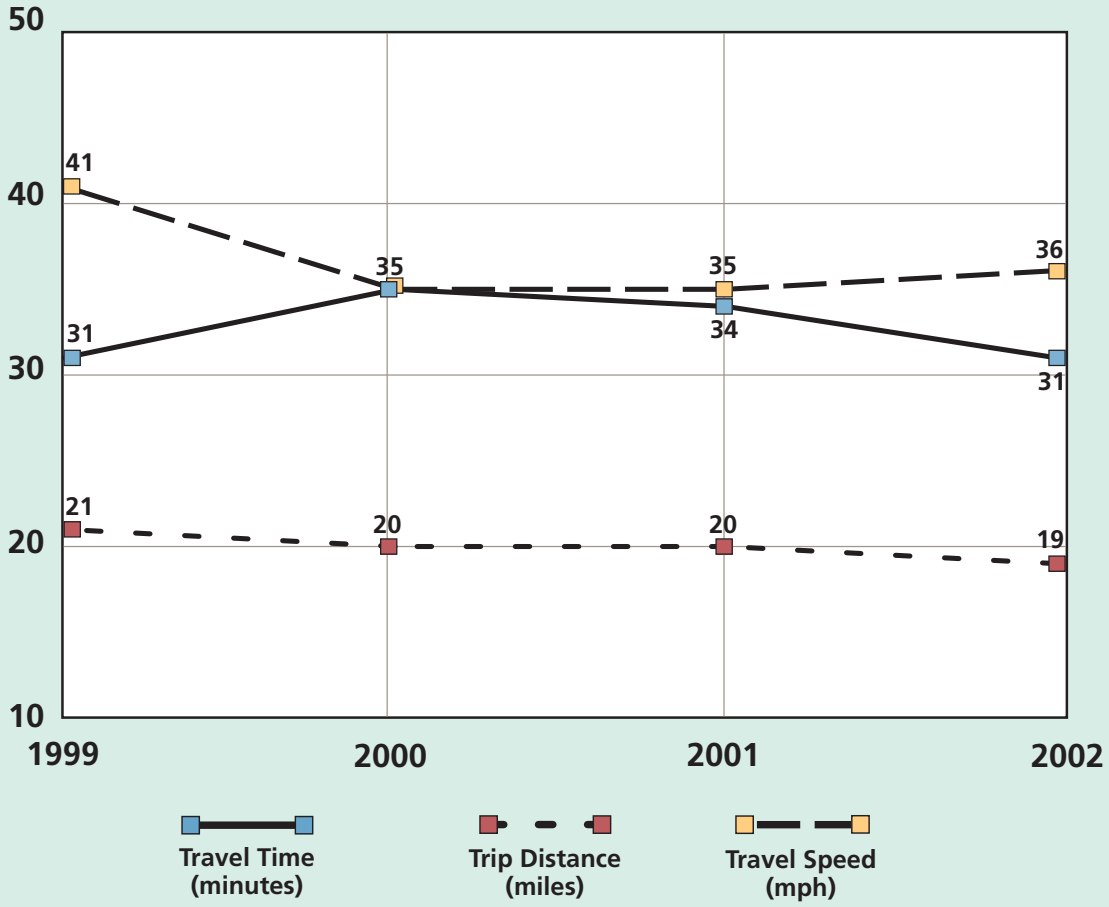


FIGURE 48

Commute Distance and Time (one-way)



n=approximately 400 each year

Perceptions of Commute Conditions and Options

Sonoma County residents have an overall positive perception of their commute conditions and options (Figure 49). Since last year, more of them feel their commute has improved. They also feel that using a commute alternative in the future is more likely and that it is easier

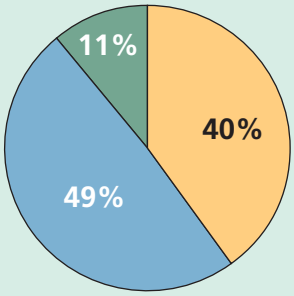
Sonoma County

to use an alternative now compared with a year ago. However, compared to the overall regional attitude, fewer Sonoma residents felt their commute had improved. When asked why, commuters mentioned heavier traffic and construction delays as two main reasons for a more difficult commute. Sonoma commuters who find it difficult to use transit mentioned time and a lack of adequate service as the main reasons for the difficulty. Residents said irregular hours and a lack of carpool partners were the reasons it was hard to carpool. Distance was the most frequent barrier cited for being unable to bike to work.

FIGURE 49

Perceptions of Commute Conditions and Options

Has commute gotten better or worse?

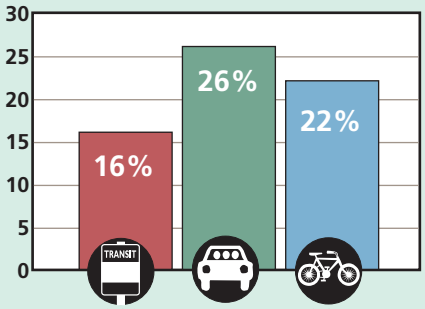


n=400

Worse Same Better

Compared to region −
Compared to 2000/2001 +

How possible would it be to use a commute alternative?

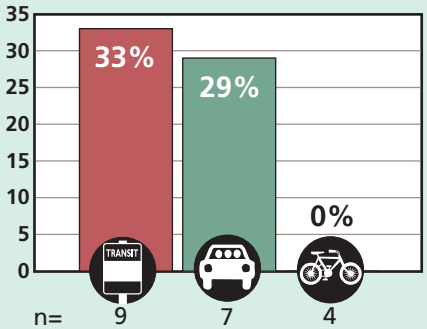


n= 360 361 364

Somewhat to Very Possible

Compared to region +
Compared to 2000/2001 +

Is it easier or more difficult to use a commute alternative compared with a year ago?



n= 9 7 4

Easier

Compared to region =
Compared to 2000/2001 +

Overall 2002 Score: +3

Overall 2001 Score: -4

APPENDIX A
COMMUTE PROFILE 2002 QUESTIONNAIRE

Hello, my name is _____, with [contractor's name], a public opinion research firm. We're talking to people about their commute experiences so commuting in the Bay Area can be improved.

1. In which county do you live?

1.	Alameda	21%
2.	Contra Costa	13%
3.	Marin	4%
4.	Napa	2%
5.	San Francisco	12%
6.	San Mateo	12%
7.	Santa Clara	26%
8.	Solano	5%
9.	Sonoma	5%
10.	Other (skip to end)	

2. Are you 18 years or older and do you work 35 hours or more a week as an employee or independent business person?

1. Yes (skip to 6)
2. No

3. May I speak with someone in your household who is?

1. Yes (skip to 6)
2. No/not available now
3. No one here matches criteria (end)

4. What is the person's name:

5. When is a good time to call: (end)

6. Do you currently hold more than one job?

1. Yes
   [If Yes: Please answer the questions in this survey with respect to your primary job and primary work site.]
2. No

7. How many days do you work each week?

1 2 3 4 5 6 7

average = 5

8. How do you usually get to work?
[select one]

1.	Drive alone	68%	(skip to 10)
2.	Carpool	17%	(skip to 10)
3.	Vanpool	1%	(skip to 10)
4.	BART	3%	(skip to 10)
5.	Bus	5%	(skip to 10)
6.	Caltrain	1%	(skip to 10)
7.	Altamont Commuter Express	<1%	(skip to 10)
8.	Capitol Corridor Train	<1%	(skip to 10)
9.	Light Rail	<1%	(skip to 10)
10.	Ferry	<1%	(skip to 10)
11.	Bicycle	1%	(skip to 10)
12.	Motorcycle	<1%	(skip to 10)
13.	Walk or jog	2%	(skip to 10)
14.	Work at home/ telecommute	1%	(ask 9)
15.	Other	<1%	(skip to 10)

9. Is this a home-based business without any other regular work location outside your home?

1.	Yes	0%	(end)
2.	No	100%	

10. Would that be [response to Q7] days a week?

1.	Yes	89%	(skip to Q12)
2.	No	11%	

11. How else do you get to work?
[select up to 3 most frequently used]

1.	Drive alone	18%
2.	Carpool	19%
3.	Vanpool	1%
4.	BART	4%

Commute Profile 2002 Questionnaire

5. Bus 5%
6. Caltrain 1%
7. Altamont Commuter Express 0%
8. Capitol Corridor Train <1%
9. Light Rail 1%
10. Ferry 1%
11. Bicycle 2%
12. Motorcycle 1%
13. Walk or jog 4%
14. Work at home/telecommute 42%
15. Other 1%

12. You indicated that you normally commute to work by [response to Q8]. Is the entire trip made by [response to Q8] or is some other type of transportation combined with this on the same day to get from home to work?

1. Yes 12%
2. No 88%

(if Q8=1 skip to 17; if Q8=2 or 3 skip to 14; if Q8=4+ skip to 19)

3. Refused/don't know 1%

(if Q8=1 skip to 17; if Q8=2 or 3 skip to 14; if Q8=4+ skip to 19)

13. What other modes do you use? [select up to 3]

1. Drive alone 19%
2. Carpool 17%
3. Vanpool 1%
4. BART 16%
5. Bus 17%
6. Commute Train 6%
7. Light Rail 3%
8. Ferry 2%
9. Bicycle 9%
10. Motorcycle 2%
11. Walk or jog 8%
12. Work at home/telecommute 0%
13. Other 2%

[Questions for primary mode = carpool or vanpool (Q8 = 2 or 3)]

14. Including yourself and the driver, what is the total number of persons usually in the vehicle? average = 3

15. With whom do you regularly carpool/vanpool? [read choices; select all that apply]

1. Household members 31%
2. Non-household relatives 8%
3. Co-workers 44%
4. Friends, acquaintances, neighbors 9%
5. Someone from a matchlist/ RIDES/755-POOL 1%
6. Casual carpool with different people each day 5%
7. Other 0%
8. Refused/don't know 1%

16. How long have you been in a carpool or vanpool?

1. Less than a month 3%
2. 1 month to less than 6 months 12%
3. 6 months to less than a year 24%
4. More than a year 61%
4. Don't know 1%

[Questions 17-19 for primary mode = drive alone (Q8=1)]

17. When you say you drive alone to work, do you mean . . . [read choices; select up to 3]

1. You sometimes have children? 15%
2. You sometimes have other household members? 4%
3. You sometimes have "others"? 6%
4. You never have anyone with you? 5% (skip to Q19)
5. Refused/don't know 1%

18. How often do you have other people in the vehicle with you? [select one]

1. Three to five days per week 61%
2. One to two days per week 25%
3. Less than one day per week 15%

19. What are your reasons for driving alone to work? [select up to 3]

1. No practical transit options 14% (skip to 21)
2. Comfort/relaxation 8% (skip to 21)
3. Travel time to work 8% (skip to 21)
4 No one to carpool with 22% (skip to 21)
5. Privacy 3% (skip to 21)
6 Having vehicle during work 11% (skip to 21)
7. Having vehicle before/after work 4% (skip to 21)
8. Having vehicle to take kids to daycare/school 1% (skip to 21)
9. Safety <1% (skip to 21)
10. Commuting costs <1% (skip to 21)
11 Work hours/work schedule 18% (skip to 21)
12. Not being dependent on others 2% (skip to 21)
13. Want to get home in an emergency <1% (skip to 21)
14 Like to come and go as I please 1% (skip to 21)
15. Driving is easiest and fastest 4% (skip to 21)
16. Love to drive my car 1% (skip to 21)
17. Enjoy private time driving to work 1% (skip to 21)
18. Other <1% (skip to 21)
19. Refused/don't know 1% (skip to 21)

[Q20 for other than drive alone respondents: Q8<>1]

20. What are your reasons for [response to Q8]? [select up to 3]

1. No practical transit options 15%
2. Comfort/relaxation 10%
3. Travel time to work 11%
4. Can use diamond lane (HOV, carpool) 2%
5. Don't own a car 3%
6. Having vehicle during work 6%
7. Having vehicle before/after work 5%
8. Having vehicle to take kids to daycare/school 15%
9. Safety 0%
10. Commuting costs 6%
11. Work hours/work schedule 12%
12. Too far from transit 0%
13. Want to get home in an emergency 0%
14. No parking available or parking too expensive 1%
15. Enjoy private time driving to work 2%
16. Environment (reduce pollution/save energy) 1%
17. Stress 1%
18. Enjoy talking to someone/company 1%
19. Other 6%
20. Refused/don't know 1%

21. Is your commute better, about the same or worse now than it was a year ago? [select one]

1. Better 28%
2. About the same 44% (skip to 24)
3. Worse 24% (skip to 23)
4. Refused/don't know 4% (skip to 24)

Commute Profile 2002 Questionnaire

22. How has it gotten better? [select a maximum of 3]

1. Traffic lighter 58% (1+ = skip to 24)
2. Roadway improvements 7%
3. Changed mode 5%
4. Moved home/changed job or job location 15%
5. Changed commute route 4%
6. Commuting at different time 4%
7. Less road maintenance work 1%
8. Weather improved <1%
9. Improved/new transit service 3%
10. Other 1%
11. Refused/don't know 2%

23. How has it gotten worse? [select a maximum of 3]

1. Traffic heavier 67%
2. Construction delays 13%
3. Changed mode 2%
4. Moved home/changed job or job location 4%
5. Changed commute route 2%
6. Commuting at different time 2%
7. More road maintenance 4%
8. Weather worse <1%
9. Transit more crowded/slower 5%
10. Other 3%
11. Refused/don't know <1%

[transit only: Q8=4-10]

24. Would you say that it is easier, about the same or more difficult to use transit to get to work now than it was a year ago? [select one]

1. Easier 21%
2. About the same 65% (skip to 25)
3. More difficult 10% (skip to 24b)
4. Refused/don't know 4% (skip to 25)

24a. Why is it easier? [select up to 3]

1. Changed my home or work location 9% (1+ skip 27)
2. Better information available 13%
3. Service reliability or frequency has improved 35%
4. New service has been added 22%
5. Employer provides incentives 1%
6. Schedule/responsibilities have changed at home or work 6%
7. Other 9%
8. Refused/don't know 5%

24b. Why is it more difficult? [select up to 3]

1. Changed my home or work location 11%
2. Service has been cut 14%
3. Service is less frequent 8%
4. Service is less reliable at home or work 20%
5. Schedule/responsibilities have changed 14%
6. Other 28%
7. Refused/don't know 6%

[carpool only: Q8=2]

25. Would you say that it is easier, about the same or more difficult to carpool to work now than it was a year ago? [select one]

1. Easier 31%
2. About the same 52% (skip to 26)
3. More difficult 13% (skip to 25b)
4. Refused/don't know 5% (skip to 26)

25a. Why is it easier? [select up to 3]

1. Changed my home or work location 11% (1+ skip to 27)
2. New carpool lane 7%

3. More people to share ride with 32%
4. Change in home/work schedule 10%
5. Other 26%
6. Refused/don't know 14%

25b. Why is it more difficult? [select up to 3]

1. Changed my home or work location (1+ skip to 27) 3%
2. Traffic is worse 50%
3. Can't use carpool lane 17%
4. Change in home/work schedule 0%
5. Partners no longer available 20%
6. Other 10%
7. Refused/don't know 0%

[bicycle commuters only: Q8=11]

26. Would you say that it is easier, about the same or more difficult to bicycle to work now than it was a year ago? [select one]

1. Easier 28%
2. About the same 45% (skip to 27)
3. More difficult 18% (skip to 26b)
4. Refused/don't know 10% (skip to 27)

26a. Why is it easier? [select up to 3]

1. Changed my home or work location (1+ skip to 27) 46%
2. New bike lane 27%
3. Found someone to ride with 0%
4. Improved facilities to lock bike or change clothes, etc.
5. Other 27%
6. Refused/don't know 0%

26b. Why is it more difficult? [select up to 3]

1. Changed my home or work location 0%
2. Traffic is worse 13%
3. Less safe to ride on streets 50%
4. No safe place to lock bike 0%
5. Other 0%
6. Refused/don't know 38%

27. About how many miles do you travel to work one-way? 16 miles

28. How many minutes does your commute to work take door to door? 30 minutes

29. What time do you normally start work? see table 7 in report

29a. AM 95% **or PM** 5%

30. Would you say your arrival time at work is very, somewhat or not at all flexible?

1. Very flexible 44%
2. Somewhat flexible 31%
3. Not at all flexible 25%

31. Would you say your arrival time at home is very, somewhat or not at all flexible?

1. Very flexible 58%
2. Somewhat flexible 31%
3. Not at all flexible 11%

32. Is there a special diamond lane, that can be used only by carpools, vanpools and buses, along your route to work?

1. Yes 40%
2. No 58% (skip to 38)
3. Refused/don't know 2% (skip to 38)

Commute Profile 2002 Questionnaire

33. Do you regularly use the diamond lane to get to work?

1.	Yes	25%	
2.	No	74%	(skip to 38)
3.	Refused/ don't know	1%	(skip to 38)

34. Does the diamond lane save you time in getting to work?

1.	Yes	85%	
2.	No	14%	(skip to 36)
3.	Refused/ don't know	1%	(skip to 36)

35. How many minutes does it save you?
16 minutes

36. Did the diamond lane influence your decision to carpool or ride transit?

1.	Yes	51%
2.	No	46%
3.	Refused/don't know	3%

37. Would you continue to carpool or ride transit if the diamond lane did not exist?

1.	Yes	56%
2.	No	29%
3.	Not sure	13%
4.	Refused	3%

38. What is the zip code where you live?

[ask 39 only if they do not know their zip code in 38]

39. What city do you live in?

40. What is the zip code where you work?

[ask 41 only if they do not know their zip code in 40]

41. What city do you work in?

42. Is there free all-day parking at or near your worksite?

1.	Yes	78%
2.	No	21%
3.	Refused/don't know	2%

43. How many employees work for your company at your site?

1.	0 –50	41%
2.	51-100	12%
3.	101-500	20%
4.	More than 500	23%
5.	Refused/don't know	3%

44. Does your employer encourage employees to use transit, carpool, bicycle or walk to work?

1.	Yes	40%
2.	No	55%
3.	Refused/don't know	5%

45. As part of your employment, do you have the opportunity to work at home instead of going to your regular place of work?

1.	Yes	24%	
2.	No	75%	(skip to 48)
3.	Refused/ don't know	1%	(skip to 48)

46. Approximately how many days per month do you work at home instead of at your regular place of work?
4 days per month

47. Would you say you make more, fewer or about the same number of trips with your car on days that you work at home? [select one]

1.	More	7%
2.	Fewer	59%
3.	Same	19%
4.	Refused/don't know	15%

[questions 48-53 for primary mode = drive alone Q8=1]

48. How possible would it be for you to carpool at least one or two days a week? Would it be . . . [read choices; select one]

1. Very possible 10% (skip to 50)
2. Somewhat possible 14% (skip to 50)
3. Slightly possible 15%
4. Not at all possible 59%
5. Refused/don't know 2% (skip to 50)

49. Why is it difficult to carpool to work? [select a maximum of 3]

1. Takes too much time 10%
2. Desire privacy 4%
3. Need vehicle during work 12%
4. Need vehicle before/after work 4%
5. Transport children 5%
6. Safety <1%
7. Work irregular hours 22%
8. Work overtime 1%
9. Prefer to drive alone 3%
10. Can't find carpool or vanpool partners 34%
11. Never considered carpooling 3%
12. Other 1%
13. Refused/don't know 1%

50. How possible would it be for you to use transit at least one or two days a week? Would it be . . . [read choices; select one]

1. Very possible 10% (skip to 52)
2. Somewhat possible 11% (skip to 52)
3. Slightly possible 11%
4. Not at all possible 67%
5. Refused/don't know 2% (skip to 52)

51. Why is it difficult to use transit to get to work? [select a maximum of 3]

1. Takes too much time 28%
2. Desire privacy 3%
3. Need vehicle during work 12%
4. Need vehicle before/after work 4%
5. Transport children 5%
6. Safety 1%
7. Work irregular hours 9%
8. Work overtime 1%
9. Transit unreliable 6%
10. Prefer to drive alone 2%
11. Cost/ too expensive 1%
12. No service available on my commute 21%
13. Never considered using transit 2%
14. Don't know how to use transit 2%
15. Other 2%
16. Refused/don't know 2%

52. How possible would it be for you to bicycle all or part of the way to work at least one or two days a week? Would it be . . . [read choices; select one]

1. Very possible 10% (skip to 54)
2. Somewhat possible 8% (skip to 54)
3. Slightly possible 6%
4. Not at all possible 74%
5. Refused/don't know 2% (skip to 54)

53. Why is it difficult to ride a bicycle to work? [select a maximum of 3]

1. I don't ride or own a bike 9%
2. Too far to ride 50%
3. Can't ride in work cloths 4%
4. Don't feel safe riding to work 8%
5. No safe place to park/ lock my bike 2%
6. No place to change/shower at work 1%
7. Takes too much time 8%
8. Need car at work or before/ after work 9%
9. Need to get in better shape first 2%
10. Never even considered it 4%
11. Refused/don't know 3%

Commute Profile 2002 Questionnaire

[questions for all respondents]

54. How familiar are you with the phone number (800) 755-POOL? Use a scale of 1 to 5 with 1 being not aware at all and 5 being very aware?

1. 70%
2. 11%
3. 9%
4. 3%
5. 7%

[Question 55 for Solano and Napa respondents only]

55. How familiar are you with the phone number (800) 53-KMUTE ? Use a scale of 1 to 5 with 1 being not aware at all and 5 being very aware?

1. 79%
2. 10%
3. 6%
4. 2%
5. 4%

[Qs 56 and 57 for Contra Costa County respondents only]

56. How familiar are you with the Contra Costa Commute Alternatives Network, also known as CC-can? Use a scale of 1 to 5 with 1 being not aware at all and 5 being very aware?

1. 85%
2. 6%
3. 4%
4. 3%
5. 3%

57. Have you heard of commute incentives available for people who either work or live in Contra Costa County?

1. Yes 21%
2. No 78% (skip to 59)
3. Refused/don't know 1% (skip to 59)

58. Can you name any of the available incentives? [select all that apply]

1. No/don't know 46%
2. Vanpool 14%
3. Transit tickets 9%
4. Carpool (scrip) 12%
5. Guaranteed Ride Home 2%
6. Carpool to BART 10%
7. School Pool 3%
8. Refused 3%

[Questions for all respondents]

59. How familiar are you with the phone number 817-1717? Use a scale of 1 to 5 with 1 being not aware at all and 5 being very aware?

1. 92%
2. 3%
3. 2%
4. 1%
5. 2%

60. When is traffic information more important to you?

1. In the morning 36%
2. In the evening 10%
3. It is equally important in the morning and evening 34%
4. Not relevant 20%

61. In your opinion, which of the following sources generally provides the most reliable, dependable traffic information?

1. TV 17%
2. Radio 67%
3. Phone 1%
4. Internet 4%
5. No difference/all the same 12%

62. In your opinion, which of the following sources generally provides the least reliable, dependable traffic information?

1. TV	18%
2. Radio	6%
3. Phone	17%
4. Internet	30%
5. No difference/all the same	30%

63. In your opinion, which of the following sources generally provides the most reliable, dependable public transportation information?

1. Internet	18%
2. Phone	7%
3. Brochures/booklets	17%
4. Radio	25%
5. Don't know	34%

64. In your opinion, which of the following sources generally provides the least reliable, dependable public transportation information?

1. Internet	15%
2. Phone	13%
3. Brochures/booklets	13%
4. Radio	11%
5. Don't know	47%

65. When is public transportation information more important to you?

1. For out-of-the-ordinary trips	29%
2. For service disruptions affecting daily commute	19%
3. It is equally important for both the above	28%
4. Never	24%

66. Do you have regular access to the Internet at home or at work?

1. Yes	89%
2. No	11%
3. Refused/don't know	<1%

67. How familiar are you with an organization called "RIDES for Bay Area Commuters" Use a scale of 1 to 5 with 1 being not aware at all and 5 being very aware?

1.	75%	[skip to 69]
2.	11%	
3.	8%	
4.	3%	
5.	4%	

68. How aware are you of the RIDES' ridematching program? Use a scale of 1 to 5 with 1 being not aware at all and 5 being very aware?

1.	50%	[Skip to 69]
2.	19%	
3.	15%	
4.	6%	
5.	9%	

68a. If you have used the RIDES' services for car/van pooling, please indicate how satisfied you were overall with the service

1. Extremely satisfied	7%
2. Satisfied	13%
3. Neutral/not sure	72%
4. Dissatisfied	6%
5. Extremely dissatisfied	2%

[Question 69 asked of Solano and Napa county respondents]

69. How familiar are you with an organization called "Solano Commuter Information"? Use a scale of 1 to 5 with 1 being not aware at all and 5 being very aware.

1.	78%
2.	9%
3.	7%
4.	2%
5.	4%

Commute Profile 2002 Questionnaire

[Questions 70 to end for all respondents]

70. Have you ever used a Call Box on the side of the road?

1. Yes	20%	
2. No	80%	[skip to 71]

70a. How would you rate your overall experience with the person who helped you over the phone?

1. Extremely good	41%
2. Good	39%
3. Neutral/not sure	11%
4. Bad	6%
5. Extremely bad	2%

71. Have you ever used the Freeway Service Patrol (FSP)?

1. Yes	17%	
2. No	83%	[skip to 72]

71a. If yes, how would you rate your overall experience with the person who helped you on site?

1. Extremely good	57%
2. Good	34%
3. Neutral/not sure	7%
4. Bad	2%
5. Extremely bad	1%

72. Do you always, sometimes or never have a vehicle available for getting to work?

1. Always available	89%
2. Sometimes available	6%
3. Never available	4%
4. Refused/don't know	1%

73. How old are you? Are you . . .

1. Less than 20	2%
2. In your 20's	17%
3. 30's	30%
4. 40's	27%
5. 50's	17%
6. 60 or older	6%
7. Refused	1%

74. And what is your combined annual (before-tax) household income? Is it . . .

1. $20,000 or less	4%
2. $21,000 to $35,000	10%
3. $36,000 to $50,000	13%
4. $51,000 to $65,000	12%
5. $66,000 to $80,000	12%
6. $81,000 to $100,000	12%
7. Or more than $100,000	23%
8. Refused/don't know	15%

75. Gender of respondent: [Do not need to ask]

1. Male	53%
2. Female	47%

Those are all the questions I have for you. Thank you very much for participating.

APPENDIX B
DEMOGRAPHIC VARIABLES AND MODE

Age, Income and Gender

Commuters above the age of 50 are more likely to drive alone and are less likely to carpool than younger commuters (Table 42). The sample of younger commuters (under the age of 20) is small and results have varied somewhat from year to year. Last year they had the highest proportion of "other" mode users—this year they are among the smallest in this category. The 20-29 year old group contains the highest proportion of "other" mode users this year. The highest carpool usage is among the 30-39 and 40-49 year old groups.

The percentage of respondents driving alone goes up as household income increases (Table 43). Only 54% of respondents from households with incomes under $20,000 drive alone while 75% of respondents from households with incomes above $81,000 drive alone. Transit and "other" modes are the most commonly used alternatives for the lower income group. Carpooling rates are highest among commuters in the $21,000 to $50,000 ranges.

TABLE 42

Age and Commute Mode

					Total
Younger Than 20 2% of Respondents	62%	18%	17%	3%	100%
20 - 29 17% of Respondents	67%	13%	12%	7%	100%
30 - 39 30% of Respondents	64%	21%	11%	4%	100%
40 - 49 28% of Respondents	68%	22%	7%	3%	100%
50 - 59 17% of Respondents	78%	10%	7%	4%	100%
60+ 6% of Respondents	77%	13%	7%	3%	100%
Regional Average	69%	18%	10%	4%	100%

n=3,581

Demographic Variables and Mode

TABLE 43

Annual Household Income and Commute Mode

					Total
Less Than $20,000 5% of Respondents	54%	16%	17%	13%	100%
$21,000 - $35,000 12% of Respondents	57%	26%	11%	7%	100%
$36,000 - $50,000 15% of Respondents	66%	18%	12%	4%	100%
$51,000 - $65,000 14% of Respondents	74%	16%	7%	3%	100%
$66,000 - $80,000 14% of Respondents	72%	15%	9%	4%	100%
$81,000 - $100,000 14% of Respondents	75%	17%	7%	2%	100%
$100,000+ 26% of Respondents	72%	16%	9%	3%	100%
Regional Average	69%	18%	10%	4%	100%
n=3,090					

Female respondents are less likely to drive alone (Table 44). Only 63% of women drive alone while 73% of men do so. This contradicts other data gathered in *Commute Profile* that shows male respondents more likely to indicate that carpooling, transit and bicycling are possible commute options they could use.

Vehicle Availability

Almost all respondents (96%) to this survey have a vehicle available for their commute "always" or "sometimes" (Table 45). For 90% a vehicle is always available. Availability varies a bit from county to county. San Francisco stands out as being the least auto dependent. Approximately 13% of San Francisco residents who responded to the survey "never" have a vehicle available for their commute.

TABLE 44

Gender and Commute Mode

					Total
Male 53% of Respondents	73%	14%	9%	4%	100%
Female 47% of Respondents	63%	22%	10%	5%	100%
Regional Average	69%	18%	10%	4%	100%
n=3,614					

As one might guess, vehicle availability has a strong influence on mode choice. For those who drive alone, 96% "always" have a vehicle available. For those who carpool, "always available" drops to 91% and for those who use transit as their primary commute mode it drops significantly to 51%.

TABLE 45

Vehicle Availability by County

n=		Always	Sometimes	Never
412	Alameda	89%	7%	4%
398	Contra Costa	93%	6%	2%
402	Marin	93%	5%	3%
399	Napa	94%	4%	2%
393	San Francisco	72%	13%	16%
400	San Mateo	91%	6%	3%
404	Santa Clara	94%	4%	2%
403	Solano	95%	4%	1%
405	Sonoma	94%	4%	2%
3,591	Regional Average	90%	6%	4%